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Current Use, Patterns of Use and Factors Affecting Use of the Army Training Extension Course (TEC) Program

by

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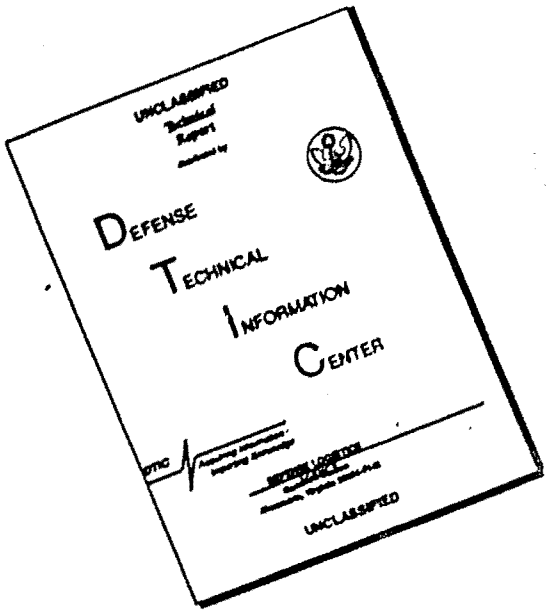

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The Army's Training Extension Course (TEC) Program consists of a large number of performance-oriented self-paced lessons (mainly audiovisual) designed to provide individual instruction for enlisted men in Army units. This report describes a research survey designed to determine the extent of use, patterns of use and factors affecting use of the TEC lessons.

The survey was conducted in two phases. Phase 1 data were collected by

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20. Abstract (Cont'd)

providing forms to selected CONUS units and activities and having them record TEC lesson uses during a 2-month period.

A total of 78,742 uses were recorded, 63,825 in TRADOC activities and 14,917 in FORSCOM units. Over 90% of all uses occurred in groups. Most (82%) were mandatory and over 95% occurred during duty hours. Estimated use per man per month for Active Component units was .353 lessons and for Reserve Component units was .802 lessons.

Phase 2 data were collected by means of questionnaires administered to soldiers and unit trainers and interviews completed with battalion/brigade/division training officers/NCOs and Training and Support Center (TASC) personnel.

Responses indicated that half (50.2%) of soldiers questioned had used TEC and 35.3% had not previously heard of it. Most soldiers, trainers, and training personnel questioned felt the TEC program should be continued and preferred TEC to 4 of 7 alternate training methods. Command emphasis on TEC was judged to be small to moderate at all levels. Equipment failure did not appear to be a significant problem.

Information was also collected regarding the areas of user and trainer characteristics, reasons for TEC use/non-use, patterns of use, distribution of information about TEC, distribution of TEC equipment, battalion TEC management, maintenance and locations of use.

Data regarding TEC usage will serve as input, with effectiveness and cost data, to allow determination of the cost-effectiveness of the program. It will also serve as input to the development of an implementation plan designed to increase cost-effectiveness and optimal utilization of the program.

The report is written for military training management.

FOREWORD

The research reported here is part of an on-going program of research directed toward development of cost effective methods for individual and collective training. This program includes research on multiple aspects of the design, development, evaluation, and integration of cost and training effective training systems for the U. S. Army.

This report is one of a series of research efforts on the Training Extension Course (TEC) program conducted under the sponsorship of the U. S. Army Training Support Center - Training Programs Directorate. This program has included detailed research into current and projected usage of TEC in the Active and Reserve components (reported here), the training effectiveness and retention of TEC instruction, the current and programmed costs of the TEC program, and analytic examination of the cost effectiveness of TEC. Research results are to be used by USATSC-TPD to determine both future program needs and future models and strategies for better implementation of the TEC system as a major component of the Enlisted Personnel Management System (EPMS).

ARI research in cost effectiveness of training systems is conducted as an in-house effort augmented by contracts with organizations selected as having unique capabilities for research in the area. This research program is being performed by the ARI-Fort Benning Field Unit with research support provided by Litton-Mellonics under contract DAHC-77-C-0011. The project is being conducted as part of Army RDTE Project 2Q763731A770, FY77 Work Program, and RDTE Project 2Q763731A770, FY78 Work Program. This research program is directly responsive to the requirements of USATSC and TRADOC.

JOSEPH ZEIDNER
Technical Director

EXTENT OF USE, PATTERNS OF USE AND FACTORS AFFECTING USE OF THE TRAINING EXTENSION COURSE (TEC) PROGRAM

BRIEF

Requirement:

To determine the extent of use, patterns of use, conditions surrounding use and factors affecting use of the Army's Training Extension Course (TEC).

Procedure:

A survey was conducted in two phases. In Phase 1, 134 selected Active and Reserve Component battalions and 37 TRADOC activities within CONUS were asked to monitor their TEC use during a 2-month period. In these units a form, provided by ARI, was completed each time a TEC lesson was used.

During Phase 2, 3404 soldiers and 608 unit trainers in 85 CONUS and USAREUR battalions completed questionnaires regarding their TEC use. Battalion level training personnel were interviewed in 42 of these battalions, 16 associated brigade/division level training officers and 7 associated Training and Support Centers (TASCs).

Findings:

A total of 78,742 uses of TEC were recorded during Phase 1. This yielded, for FORSCOM battalions, an average TEC use per man per month of .353 lessons in the Active Component and .802 lessons in the Reserve Component.

Over 90% of all recorded use occurred in groups. Most of this use was mandatory (81.8%) and occurred during duty hours (96.6%).

Only 50.2% of soldiers sampled in Phase 2 had used TEC and 35.3% had never heard of TEC.

Most soldiers (TEC users) and unit trainers and all interviewees felt that TEC should be continued. Most users, trainers and interviewees also preferred TEC to 4 of 7 other training methods (lectures, small group instruction, training films, Soldier's Manual).

Reasons most often cited by soldiers for lack of use pertained to ignorance of TEC, unavailability of equipment and lack of encouragement to use. Least often cited were reasons of lack of need for or perceived benefit from TEC training.

Command emphasis on TEC was judged to be small to moderate at all levels and most often took the form of announcements, briefings or specific orders/requests.

Most soldiers (74%) learned about TEC from their unit trainers.

Basis of issue for CUE-SEES and TEC lessons was considered adequate by over half of battalion interviewees.

Equipment failure did not appear to be a significant problem.

Utilization of Findings:

Data on TEC usage, when combined with cost and effectiveness data, will allow determination of the cost effectiveness of the TEC program. It will also be used as input to the development of an implementation plan designed to increase cost effectiveness and promote optimal utilization of the program.

CURRENT USE, PATTERNS OF USE AND FACTORS AFFECTING USE OF THE ARMY TRAINING EXTENSION COURSE (TEC) PROGRAM

CONTENTS

TABLES

Page

TABLES (Cont'd)

TABLES (Cont'd)

TABLES (Cont'd) Page

TABLES (Cont'd) Page

FIGURES

CURRENT USE, PATTERNS OF USE AND FACTORS AFFECTING USE OF THE ARMY TRAINING EXTENSION COURSE (TEC) PROGRAM[1]

In response to an acknowledged need for better individual training in combat arms units, the Combat Arms Training Board was established and in 1972 began development of the Training Extension Course (TEC) program. The TEC program was designed to assist combat arms soldiers and unit commanders in upgrading MOS/job proficiency by providing to units in the field multi-media instructional materials prepared by the service schools.

Since its inception, the TEC program has gone through a number of phases of development. In the initial phase, 56 audio-visual lessons were developed in a sound-slide format covering skills required of soldiers with MOS 11B. The second phase began in 1973 and involved development of a large number of lessons for eight initial combat arms MOSs, 11B and 11C for Infantry, 11D and 11E for Armor, 13A/B and 13E for Field Artillery, and 16P and 16R for Air Defense. During this phase, TEC lessons and hardware were distributed to all combat arms battalions in the Army. The TEC program has continued to expand during subsequent phases of development and is currently being extended to cover combat service and service support units.

TEC differs from conventional Army training in a number of ways. First, TEC lessons are intended to be performance oriented. Specific performance-oriented training objectives are determined for each lesson prior to lesson development and the lesson is designed to teach to those objectives. Second, a diagnostic test is included with the Lesson Administrative Instructions (LAI) which accompany each TEC lesson. The purpose of the test is to determine the areas covered by the lesson in which a soldier is weak. Third, TEC lessons are designed for self-paced training. Fourth, each TEC lesson goes through a validation process designed to insure that each lesson provides effective training on every lesson objective. The majority of TEC lessons (77 percent as of September 1977) are in the form of audio-visual packages designed for use with a Beseler CUE-SEE viewing device.

Due to the size and criticality of the TEC system, training evaluations of costs,[2] effectiveness,[3] and usage have been and continue to be of prime importance.

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[1]The authors would like to thank SGT Keith L. Evans and SGT Frederick H. Heller for their invaluable assistance in survey form distribution, compilation of returns, and data reduction.

[2]Tempkin, S., Connolly, J. A., Marvin, M. D., Valdez, A. L. and Caviness, J. A. A Cost Assessment of Army Training Alternatives. ARI Research Problem Review 75-3, 1975.

[3]Knerr, C. S., Downey, R. G., and Kessler, J. J. Training Individuals in Army Units: Comparative Effectiveness of Selected TEC Lessons and Conventional Methods. ARI Research Report 1188, 1975.

An initial survey to determine the degree and conditions of TEC utilization was completed in 1975.[4] Results of the survey yielded information regarding utilization patterns and perceived benefits of TEC. However, because at that time only 42 TEC lessons had been distributed to a select group of divisions, the findings no longer adequately reflect the state of the TEC program.

OBJECTIVES

This usage survey was conducted in two phases. The primary objective of Phase 1 was to obtain data on the level of TEC use within combat arms battalions. These data served as input to the "cost of impression" formula developed by the Army Training Support Center (ATSC) to provide an estimate of the cost of a single use of a TEC lesson based on development and distribution costs. Additional information concerning conditions of TEC use was also collected.

The primary objective of Phase 2 was to determine the state of those factors (conditions of use, opinions) affecting TEC use. The combined results of the two phases provide information leading to suggestions for improved TEC implementation and optimal utilization of the program.

METHOD

The two phases of the current TEC usage survey were conducted with two different but overlapping samples. Phase 1 survey forms were mailed to 134 Active and Reserve Component FORSCOM battalions and 37 TRADOC activities within CONUS. Phase 2 survey forms were distributed to 85 FORSCOM battalions including 49 of the originally sampled battalions, 23 additional CONUS battalions and 13 USAREUR battalions.

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[4] McClusky, M. R., and Tripp, J. M. An Evaluation of the Utilization Maintenance and Perceived Benefits of the Training Extension Course (TEC) (Tech. Rep 75-18). Alexandria, Va.: Human Resources Research Organization, 1975.

During Phase 1, all battalions and activities were provided mark-sense record forms (Appendix A) to be distributed to TEC learning sites and used to record both individual and group TEC use. One form was to be completed each time a lesson was used during a two-month sampling period (4 October-29 November, 1976).

Five separate data collection instruments were used during Phase 2. Copies of a questionnaire designed for TEC users/non-users and a questionnaire designed for unit trainers were distributed across companies/batteries within each battalion for completion. ARI personnel completed (on-site or by telephone) 42 structured interview schedules designed for battalion training personnel, 16 interview schedules designed for brigade/division training personnel and 7 designed for Training and Audiovisual Support Center (TASC) personnel.

RESULTS - PHASE 1

Ninety-three of 134 battalions sampled during Phase 1 returned questionnaires. Overall 78,742 (63,825 FORSCOM; 14,917 TRADOC) uses were reported where one TEC use was defined as the viewing of one TEC lesson by one individual. TRADOC uses included: 7032, ADA School; 611, Armor School; 254, Artillery School; 745, Infantry School; and 6275 in 13 other activities.

BASIC USAGE DATA

Raw use totals from FORSCOM units were adjusted (Technical Supplement, p.19) to estimate average TEC use per man per month. Adjusted figures showed higher use rates among RC than AC units. RC use rates were: 1.059, Armor; .875, Infantry; .865, ADA; .389, Artillery. Comparable AC use rates were: .389, Armor; .474, Infantry; .348, ADA; .134, Artillery.

The remainder of results presented in this summary are based upon the entire sample or subsample indicated. However, some results did show apparently meaningful variations among combat arms and/or components which are discussed in the Technical Supplement.

CHARACTERISTICS OF TEC USE AND USERS

Two types of TEC use were recorded in Phase 1. Use of TEC alone or in small (2-5 users), informal groups was defined as Individual Use and use in larger, more formal groups was defined as Group Use. Over 90% of all recorded use was Group Use.

Group users indicated that most (81.8%) of their uses were mandatory and almost all (96.6%) occurred during duty hours. Among FORSCOM units, Group uses were most often for refresher training (64.9%, AC: 65.6%, RC) and among TRADOC activities, they were most often for initial training (66.9%).

Most of the 6.2% of all uses which were Individual were voluntary (66.2%) and occurred during duty hours (88.1%). Like Group uses, they were also most often (60.7%) for initial or refresher training.

RESULTS - PHASE 2

Returns received from 77.6% of battalions sampled during Phase 2 included 3404 User Questionnaires and 608 Unit Questionnaires. Respondent populations are characterized in the Technical Supplement (pp. 62-82).

Among User Questionnaire respondents, 50.2% (of 3,284) indicated that they had used TEC. These respondents (TEC users) further indicated that they had used an average of 4.61 TEC lessons. Remaining respondents (TEC non-users) were eliminated from all further analyses except those regarding continuation of TEC and reasons for non-use.

OPINIONS ABOUT TEC

As shown in Figure 1, most respondents indicated that they felt TEC should be continued. This included 65.2% of TEC users/non-users, 87.7% of unit trainers and all battalion interviewees. It might also be noted that 86.3% of the remaining users/non-users and 79.5% of remaining trainers did not indicate that they felt TEC should not be continued but that they did not know.

Respondents at all 3 levels also indicated their preferences for TEC or each of 7 other methods of training as means of SQT study. Results (Figure 2) showed all levels to be similar in preference patterns with most TEC users, trainers and interviewees preferring TEC to classroom lectures, small group instruction, training films and the Soldier's Manual. All respondent samples were almost evenly split in preference between TEC and classroom demonstrations. Roughly about a third of respondents preferred TEC to hands on exercises using models and very few preferred TEC to hands on exercises using equipment.

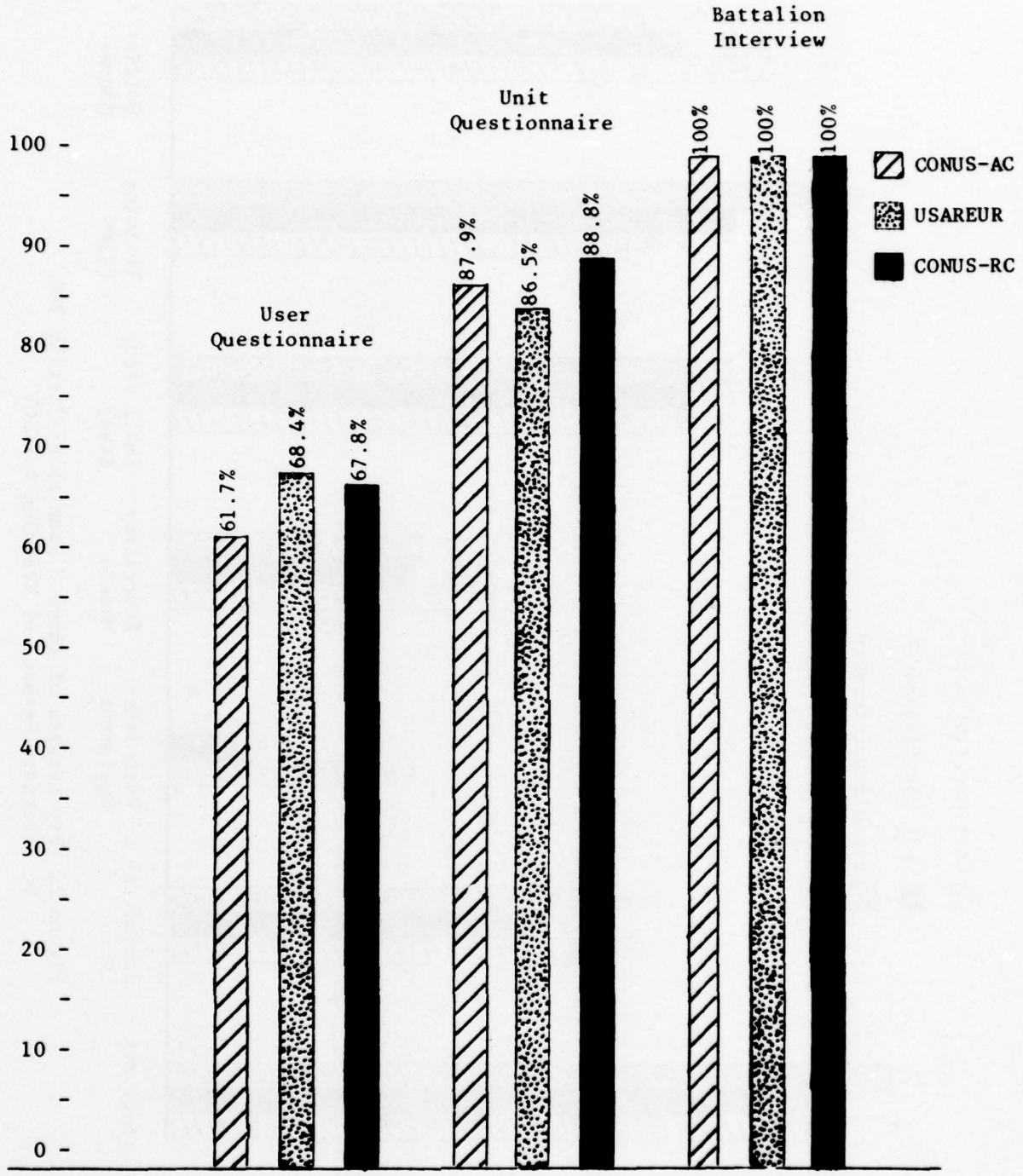

Figure 1. Percentages of Phase 2 Samples Indicating the Opinion that the TEC Program Should Be Continued

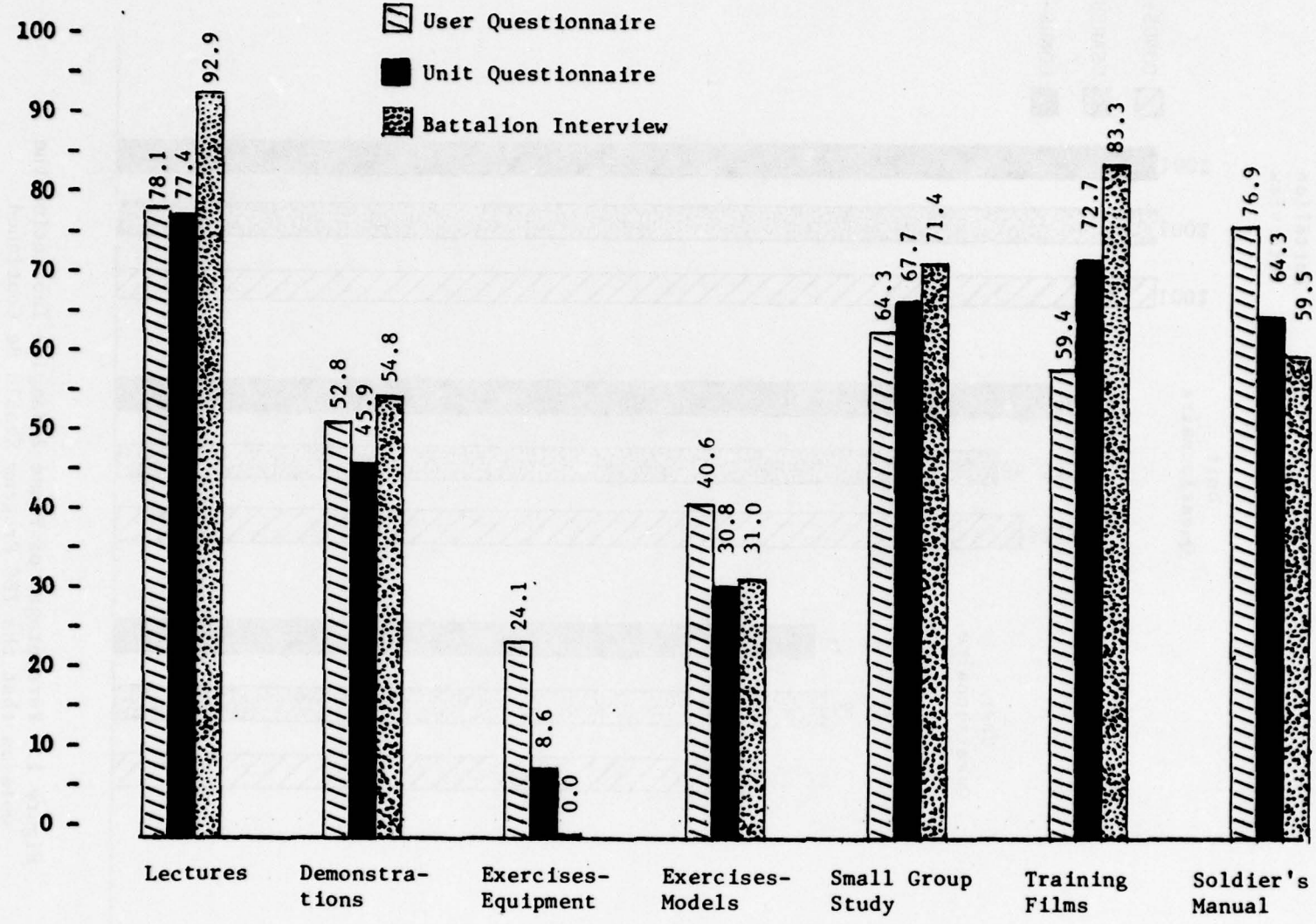

Figure 2. Percentages of Phase 2 Samples Preferring TEC to Alternate Methods of Training for SQT

REASONS FOR TEC USE

When TEC users/non-users were asked why they had not used TEC or used it more frequently, 35.3% indicated that they had not previously heard of TEC. Remaining respondents marked as many as applied of 17 listed reasons for lack of use.

Reasons most often cited by them concerned ignorance of TEC, unavailability of equipment and lack of encouragement to TEC use. Those reasons least often cited pertained to lack of need for TEC training (e.g., TEC will not help me do my job better, ...get promoted, ...pass SQT.). (For exact reasons see Technical Supplement, pp. 95, 97-99).

Unit TEC users also responded to a list of 9 possible reasons why they might use TEC. Most frequently cited reasons were: learning something new (64.3%), reviewing (59.0%), increasing job ability (53.2%) and preparing for SQT (48.0%).

Unit trainers indicated that TEC was used to a small to moderate extent for each of 17 training tasks (e.g., SQT preparation, follow-up training, remedial training).

Battalion interviewees saw TEC as a means of individual instruction and a training aid which could be used as a supplement, substitute or preparation for lectures. Reasons for unit TEC use cited by them included upgrading enlisted qualifications, SQT training, NCO training and MOS reclassification.

COMMAND EMPHASIS

Trainers and interviewees rated encouragement to use TEC as little to moderate at all 3 levels (Co/Btry, Bn, Bde). Most often cited means of encouragement were announcements, briefings and specific orders/requests. Most TEC users felt their commanders did want them to use TEC and stated they would use TEC even if not told to.

DISTRIBUTION OF INFORMATION ABOUT TEC

One factor potentially affecting TEC use is knowledge or information available to the soldier and trainer about the program. Therefore, the flow of information about TEC was investigated. Results showed that most soldiers (74%) learned about TEC from their unit trainers. Other most often used sources of information were the Soldier's Manual, Learning Center personnel and other soldiers.

Although 76.7% of unit trainers and 87.8% of battalion interviewees had found their introductions to TEC to be satisfactory, they were less sure of the adequacy of information they were currently receiving. Only half the interviewees felt they had all lessons of interest to the battalion and the other half felt they did not or were not sure. Only 42.3% of unit trainers reported being informed of new lesson arrivals at all.

DISTRIBUTION OF TEC EQUIPMENT

Battalion interviewees indicated that CUE-SEEs were kept at battalion learning centers or headquarters (training rooms, etc.) in 39.4% of units and dispersed among companies/batteries in 51.5% of units. (Interviewees from other units did not know.) Lessons were kept at battalion level in all but one unit. Most units (83.3%) had signout procedures but few had formalized policies concerning who could sign out equipment and for how long.

Most interviewees (61.9%) considered lesson basis of issue (BOI) to be adequate. A number of them, however, expressed needs for additional copies of particular lessons. Only about half of them (54.8%) considered the CUE-SEE BOI to be adequate. The most often mentioned need was for one or more machines per company/battery and additional ones for float, headquarters, etc.

LESSON AND EQUIPMENT FAILURE

Lesson and equipment failure did not appear to be a significant problem. Users reported a low frequency of CUE-SEE failure during use. Most unit trainers and battalion interviewees felt that neither lesson tape/cartridge failure or CUE-SEE failure occurred often enough to hinder effective TEC use in the unit. Those who did feel failure to be a problem most often cited video advance and synchronization as sources of difficulty.

MAINTENANCE

About 75% (excluding those who did not know) of CONUS respondents reported no problems in repair, transporting equipment to and from maintenance facilities, or direct exchanging malfunctioning lessons or equipment. No interviewees reported significant or continuing problems.

USAREUR respondents did report some problems in all three areas. This apparently was due to difficulties in setting up a total USAREUR repair system. Steps have been taken to alleviate this problem and the program has been coordinated under the Training Support Activity, Europe (TSAE). However, data collection occurred at a time too early to evaluate the impact of this program.

BRIGADE/DIVISION INTERVIEWS

Brigade/division interviewees (16) generally saw the TEC program objectives to be individual training and supplementary unit instruction. All agreed that the program should be continued and the percentages among them preferring TEC to other training methods (Technical Supplement, pp.147) were similar to those found at other levels (Figure 2).

Most saw the role (if any) of training offices at their levels with regard to TEC as one of monitoring and assistance. Brigade/division command emphasis on TEC was generally considered small to moderate with little or no emphasis from levels above division.

TASC INTERVIEWES

TASC interviewees (7) were primarily civilians. Over half felt that additional manpower (technical, clerical) was needed specifically for TEC. They also suggested more TEC equipment training for repairman and offered a variety of specific information regarding CUE-SEE design and malfunction which is included in the Technical Supplement.

CONCLUSIONS

It appears that the TEC program is somewhat underutilized relative to its potential. The reason for this does not seem to be inadequacy in the functioning of the program itself. Areas such as equipment distribution, failure and repair showed no major problems.

Neither does the reason appear to be lack of confidence in the program. Its acceptance is demonstrated by the majorities at all levels sampled advocating its continuance and the strength of preference for it over several other standard methods of training.

Finally, the reason does not appear to be lack of need for training or TEC's ability to meet that need. Very few users/non-users cited lack of need for or benefit from TEC training as a reason for non-use. Unit trainers and battalion personnel reported a variety of tasks and types of training where TEC proved useful.

Two related factors which do stand out in relation to lack of TEC use are ignorance about the program and a low level of command emphasis. Thirty-five percent of potential TEC users sampled had never heard of the program. A substantial number of those who had heard of it claimed to know little about it. Command emphasis at all levels was small to moderate and unit trainers seemed to be kept less well-informed than they might be.

A third factor (possibly stemming from the first two) is that the units may not make TEC sufficiently available to the soldier. Although results indicated that a highly motivated soldier could obtain TEC in most units, there did appear to be some red tape and footwork involved which could discourage a less than highly motivated individual. For example, interviewees reported many centers to be closed after duty hours. Correspondingly, very few uses occurred after duty hours. Also, several reasons for non-use frequently cited by soldiers pertained to non-availability.

The factors of ignorance, lack of emphasis and non-availability may have their greatest impact on the voluntary, individual type of use for which the TEC program was designed. This may explain another basic finding of this project, namely, that a strong majority of uses were mandatory and almost all occurred in groups.

While it could be argued that units would make their TEC lessons more readily available if there were more demand for voluntary use, a similar line of reasoning does not hold for emphasis on and awareness of TEC. It is unrealistic to expect much voluntary use of TEC (or any other training program) unless the potential user has at least the incentive of being aware of the program's potential benefit for him. Moreover, use of the program must be supported and encouraged by his superiors.

It might also be necessary to provide a stronger incentive to the soldier than mere knowledge of training benefits to him in order to achieve a substantial increase in voluntary use. One alternative to increase use would be to provide such incentives. If none can be found which are desirable and feasible to administer, a second alternative might be to consider mandatory, group use as the primary mode of TEC use and to direct the program toward optimizing use under these conditions.

This line of argument is not to say that there is no room for improvement in the TEC program or that a variety of small problems and less than ideal conditions do not contribute to diminished TEC use. It might also be that potential difficulties exist which are masked by less than maximal rates of use.

However, as the situation now stands, conclusions were well summarized by interviewees at all levels who stated that the Army needs more education about TEC in the form of introduction in officer/NCO courses, pamphlets/fliers and general chain-of-command communication.

METHOD - PHASE 1

SAMPLE

The FORSCOM population represented by the utilization survey sample comprised both Active and Reserve Component combat arms (CA) battalions within CONUS. The number of battalions sampled from each of the combat arms was proportional to the strength of that combat arm within the existing population. For the Active Army, one battalion was sampled from every CA brigade within CONUS. The sample included 50 active army CA battalions and 84 reserve component CA battalions in CONUS. For USAR and National Guard, the sample reflected the geographic distribution of the Reserve Component population, by state. The sampled units are identified in Appendix B.

In order to get a complete picture of TEC use by a battalion, it was necessary to sample all TEC facilities through which users had access to lessons. Thus, all installation TEC centers above battalion level were sampled at those posts where sampled units were located. This resulted in data from users in non-sampled units.

A number of TRADOC non-units, e.g., training divisions, schools, NCO academies, were also included in the sample. These included combat arm schools, training brigades, etc. A complete list is included at Appendix B.

DATA COLLECTION FORMS

TEC Phase 1 usage data were collected on mark-sense forms (Appendix A) printed on both sides. Each side was designed for recording of a different condition of TEC use.

Side 1, the TEC Individual Usage Form, asked for information about the individual TEC user. It was designed for use within a permanent or semi-permanent TEC facility and was used where TEC was viewed individually or in small, informal groups of 5 or fewer soldiers. Information recorded on this form included user's unit, primary MOS, grade, SSAN, and primary reason for using the TEC lesson. The user also recorded whether use was voluntary or mandatory and on-or off-duty; whether he checked out the

lesson pretest; how often (per month) he used TEC; and whether he had used the lesson being checked out before. The number of users viewing the TEC lesson together was also recorded on the form.

Side 2, the TEC Group Usage Form, was used to record TEC use where lessons were checked out of the TEC facility and use within the facility by large, organized groups. The following information about the using group was recorded: (1) unit to which the group belonged; (2) grade of requestor; (3) MOS most common among users and percentage of users having this MOS; (4) size of group; (5) number in the group who used the pretest; (6) where the lesson was used; and (7) the primary purpose of use. Group users also recorded the type of use, on-duty/off-duty; number of viewers per Beseler; whether the lesson was projected or shown directly; and whether equipment or materials covered in the lesson content were used with the lesson.

On all forms it was requested that a Lesson Custodian record the type and level of TEC facility in which the TEC lesson was located and the date and time at which the lesson was checked out. On TEC Group Usage Forms, date checked in was recorded, and on TEC Individual Usage Forms, time checked in was recorded. The lesson number was also recorded. Since each form could be used to record use of several lessons within a single series, the number of lessons requested and the number available of those requested was recorded along with the number of the lowest numbered lesson requested in the series.

PROCEDURE

TEC usage data collection forms and instructions for completion were mailed to each of the sampled units in sufficient numbers to cover anticipated usage.

Instructions (Appendix A) which accompanied the forms gave details for appropriate conditions of use for each form and appropriate completion of each question. Each battalion was to designate a TEC Usage Form Custodian to see that forms were properly completed.

A form was to be completed each time a TEC lesson was used during a two month sampling period between 4 October 1976 and 29 November 1976. All forms were to be returned by mail at the end of this period. A questionnaire was included in each package of forms. This was used to report any unusual circumstances preventing TEC use or altering the unit's normal pattern of TEC use, e.g., field exercises.

METHOD - PHASE 2

SAMPLE

The core of the Phase 2 usage sample was a subsample of FORSCOM units from Phase 1 which included 17 Active Component (AC) and 32 Reserve Component (RC) battalions. Added to these were 23 CONUS battalions for a total of 72 (28 AC and 47 RC). Also sampled were 13 battalions from U.S. Army, Europe (USAREUR). Those battalions sampled were spread as evenly as possible across all combat arms. No TRADOC activities were included in Phase 2 data collection.

Each Phase 2 battalion sampled by mail was requested to return 80 questionnaires completed by potential TEC users. Battalions receiving on-site data administration were requested to provide 55 men.[5]

Each sampled battalion was also asked to provide 15 questionnaires (3 per company/battery) completed by company/battery level unit trainers. These were defined as NCO's or possibly junior officers who had served as instructors or had been in some way highly involved in unit training. Battalion level interviews were also administered to battalion level TEC officers/NCO's in a subset of Phase 2 battalions which included 13 CONUS AC battalions, 17 CONUS RC battalions and 12 USAREUR battalions spread across all combat arms.

Individuals "most knowledgeable" about TEC use were also interviewed at selected brigade and division level G-3 offices and Training and Audio-visual Support Centers (TASCs). A total of 12 brigade, 6 division and 7 TASC interviews were completed for CONUS and USAREUR Active Component forces. None were completed within the Reserve Component because the geographical dispersion and command structure made such interviews inappropriate.

QUESTIONNAIRES/INTERVIEW SCHEDULES

The data collection instruments for Phase 2 were developed for ARI by the Mellonics Systems Development Division of Litton Systems, Inc.[6] These included: A User Questionnaire (for soldiers); a Unit Questionnaire (for for company/battery level trainers); structured interview schedules

[5] Only 55 men were requested in these battalions because data was collected in conjunction with TEC effectiveness research which required a sample of that size.

[6] Shelnutt, Jack B. Survey Instruments to Examine the Use and Accountability of the Army's Training Extension Courses. Fort Benning, Ga.: Litton-Mellonics Systems Development Division, 1977.

battalion and brigade/division training officers; and a structured interview schedule for TASC personnel. Questionnaires and interview schedules are included as Appendix C.[7]

The background for selection of topic areas for the survey instruments was previous TEC research and implementation literature as well as interviews with TEC management personnel at the Army Training Support Center (ATSC). Categories to be included were then selected based upon the criteria of anticipated respondent knowledge in the area, unavailability of the information elsewhere, and gathering of maximal information for possible improvement of the TEC program.

Six initial categories of evaluation were identified. These were: (1) equipment used to present TEC lessons; (2) content of TEC lessons; (3) integration of TEC into training; (4) management/distribution of TEC lessons and equipment; (5) maintenance; and (6) locations of TEC use. In addition, all instruments included questions pertaining to the characteristics of respondents.

The format for all instruments was geared for efficiency in data collection and reduction. Questionnaires were composed primarily of multiple choice and checklist questions with few open-ended questions. Interview schedules included many more open-ended questions and opportunities for comments. In all cases potential knowledge and understanding of respondents were considered in question wording and content.

PROCEDURE

User and Unit Questionnaires were collected on-site by ARI personnel or by mail. Those administered by mail were forwarded through appropriate points of contact. No specific instructions other than those on the questionnaire were given since the instruments were designed to be self-explanatory.

Interviews were administered by ARI personnel on-site or by telephone. Interviewers asked to talk with S-3's/G-3's or the individual within the training office "most knowledgeable" about current TEC use practices (by virtue of being designated "TEC Project Officer/NCO," managing the learning center, etc.)

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[7]The interview schedule for brigade/division officers was shortened by ARI personnel following initial data collection. Initial interviews showed many questions appropriate for battalion training officers/NCOs to be outside the normal or necessary working knowledge of training officers at these levels.

RESULTS - PHASE 1

A total of 134 combat arms battalions were included in the TEC usage survey. Final returns were received from 93 of these units for an overall return rate of 69 percent. A summary breakdown of survey returns by combat arm and component is shown in Table 1. Of 42 TRADOC and other miscellaneous activities contacted, 17 returned forms and 7 responded negatively.

UNIT OF ANALYSIS

Two types of forms were used in the survey. The TEC Individual Usage Form was used to record one use, by one individual, of one or more TEC lessons belonging to a single series. The TEC Group Usage Form was used to record one period of use, by one group, of one or more TEC lessons belonging to a single series. The basic unit of analysis was derived as follows from the information recorded on these forms during the sampling period.

A form reflects one instance of use of all or part of a single TEC lesson series. For a single form, the number of TEC lessons in the series used could vary as could the number of persons viewing the lesson. There were 2456 TEC forms completed during the sampling period. (This figure does not include forms that were too incomplete to be useful.)

One use of TEC is defined as the viewing of one TEC lesson by one individual, either alone or in a group. A TEC use is the basic unit of analysis. In order to determine TEC uses it was necessary to determine the number of users and the number of lessons used for each form. These were determined as follows:

On both group and individual usage forms users were asked to indicate the lesson number of the lowest numbered lesson requested in the series represented. (Use of lessons from other TEC series required completion of separate forms.) Users were also asked to indicate the number of lessons "requested" and the number "available" of those requested, i.e., the number actually checked out for use. Lessons recorded as "available" indicated the number of lessons used during the session. For each session, the number of uses was determined by multiplying the number of lessons used by the number of users recorded on the form.[8]

[8]Forms were checked for errors in completion. Where errors were found, adjustments in computation of uses were made to improve accuracy of the usage estimates. A detailed list of adjustments is included as Appendix D.

Table 1 - FORSCOM Units Returning Phase 1 Survey Forms by Combat Arm and Component

Combat Arm	Component		
	Active	Reserve	Total
Air Defense Artillery	3 (75)[a]	3 (75)	6 (75)
Armor	9 (64)	15 (88)	24 (77)
Artillery	8 (57)	19 (70)	27 (66)
Infantry	12 (67)	24 (67)	36 (67)
Total	32 (62)	61 (73)	93 (69)

[a]Numbers in parentheses indicate percent of initial battalions sampled represented by returns.

BASIC USAGE DATA

Computation of TEC uses as described above yielded a total of 63,825 FORSCOM uses of TEC during the 2-month sampling period. A breakdown of TEC uses by combat arm and component is presented in Table 2. Although Infantry shows the highest and ADA the lowest number of uses, comparisons across combat arms are inappropriate for these data because the sample included different numbers of battalions from each combat arm.

Also shown in Table 2 are the numbers of distinct lesson series used. Among combat arms, the most (48) distinct series were used in Armor. The fewest (28) were used in ADA. A total of 64 distinct series were used in the total sample. Differences among combat arms might reflect differences in numbers of series available and appropriate for use in a given combat arm.

To estimate TEC use per battalion per four weeks for combat arms battalions within CONUS, the AC figures in Table 2 were divided by two times the number of AC battalions contributing to each use figure. The resultant values, presented in Table 3, give the estimated TEC uses per battalion for a four week interval. The total uses for each RC battalion were divided by the number of weekend drills for that battalion. Then the results were averaged across battalions for each combat arm.

However, these estimates are not completely comparable across combat arms given that the average number of soldiers in a battalion is not the same for each combat arm. Therefore, estimated monthly usage figures were adjusted by average number of men per for each combat arm battalion.[9] These adjusted figures, also reported in Table 3, reflect average TEC use per man per month.

In comparing across combat arms, use per man figures show only one reversal in results from monthly battalion usage estimates. Average use in Armor is higher rather than lower than that in Infantry among Reserve Component units. The average use rate for ADA is still slightly lower than that for Infantry and Armor and the average use rate for Artillery is noticeably lower than that for all three other combat arms in both components.

These basic TEC usage data yield the best estimate from the survey sample of the actual level of TEC use per battalion currently occurring with CONUS Combat Arms Units. Day-to-day events affecting TEC use are reflected in the rates of use since a number of units within the sample experienced special requirements such as field exercises during the sampling period. In order to maintain a realistic picture of TEC use levels, no attempts were made to adjust data for factors temporarily inflating or depressing TEC use with the sampled units.

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[9] These figures were obtained from FORSCOM, DCSPER, PRD for Active Component battalions and FORSCOM, DCSOPS, RD for Reserve Component battalions.

Table 2 - TEC Uses Among Sampled FORSCOM Battalions by Combat Arm and Component

Combat Arm	Component		
	Active	Reserve	Total
Air Defense Artillery	1012 (17)[a]	1936 (21)	2948 (28)
Armor	4458 (32)	13800 (45)	18036 (48)
Artillery	777 (31)	8730 (33)	9507 (36)
Infantry	8475 (28)	24637 (30)	33112 (34)
Total	14722 (49)	49103 (57)	63825 (64)

[a] Numbers in parentheses reflect numbers of distinct lesson series used.

Table 3 - Estimated Average TEC Use for a Battalion Within CONUS per Four Weeks (AC) or per Weekend Drill (RC)

Combat Arm	Component	
	Active	Reserve
Air Defense Artillery	169 (.348)[a]	495 (.865)
Armor	248 (.389)	489 (1.059)
Artillery	63 (.134)	201 (.496)
Infantry	353 (.474)	511 (.875)
All Combat Arms	234 (.353)	408 (.802)

[a]Numbers in parentheses have been adjusted by average battalion size for that combat arm and component and reflect average use per man per month.

ESTIMATED MAXIMAL USE

TEC use within a unit during maximal or peak periods of use would be relevant to such considerations as hardware requirements. Therefore, a monthly use rate for only those battalions reporting no special requirements depressing TEC use rate during the sampling period was computed and is shown in Table 4. (The questionnaire for reporting of special requirements was part of the previously discussed data collection package included at Appendix B.)

Note that the use figures for Active Artillery and for Reserve Armor and Infantry in Table 4 are lower than the comparable figures in Table 2. In each of these cases one of the battalions with the largest use rate reported special requirements depressing their use of TEC over the sample period.

USES AMONG TRADOC ACTIVITIES

Table 5 presents the total number of TEC uses among TRADOC activities during the two-month sampling period. Results for the combat arm Schools show Field Artillery to again have the lowest rate of use. However, unlike results for FORSCOM battalions, the ADA School had by far the highest total number of uses among TRADOC activities. This total is nearly 10 times the rate for the next highest user, Infantry School.

The "Other" category of Table 5 includes all other miscellaneous non-units in the sample. These were primarily TRADOC activities but some USAR schools are included.

FACTORS AFFECTING USE RATES

It should be noted that there are a number of factors that may have affected the reported use rates. First, there undoubtably were cases where a TEC lesson was checked out without a form being completed. Sample units were asked to report on the unit questionnaire the estimated number of such cases. Averaged across those units returning questionnaires, the mean of those estimates is 3.4 for the Active Component and 12.0 for the Reserve Component. Of course in those units not having a closely monitored checkout procedure, these estimates are little more than guesses.

Table 4 - Estimated Maximal Monthly TEC Use by Combat Arm and Component

Combat Arm	Component		
	Active	Reserve	Total
Air Defense Artillery	214 (2)[a]	961 (1)	463 (3)
Armor	370 (6)	450 (11)	422 (17)
Artillery	60 (5)	289 (12)	220 (17)
Infantry	526 (8)	456 (18)	478 (26)
Total	341 (21)	418 (42)	392 (63)

[a]Numbers in parentheses indicate numbers of battalions used in computation.

Table 5. TEC Uses by TRADOC Activities

Activity	Number of Uses
ADA School	7032
Armor School	611
Field Artillery School	254
Infantry School	745
Other	483[a]

[a] This number is the average use per activity of 13 other TRADOC activities. Total uses for these activities was 6275.

A second factor affecting the reported rates is the representativeness of responding units. All units included in the initial sample but not returning forms were contacted to determine the reason for lack of response. Most of the units that had not returned forms stated that either the forms had not been received or that forms had been mailed to ARI and were apparently lost in transit. It is likely, however, that battalions with active TEC programs would take greater care to make sure forms were completed and returned than would battalions with less active programs.

A third factor is the understandable desire in any unit to look good. While the cover letter accompanying the forms emphasized the importance of obtaining an accurate estimate of the true rate of use of TEC, some units may have exaggerated their actual use rate. In some cases where unusually high use rates were reported, the unit was contacted by phone to double-check the reported figures. In each case the originally reported figures were supported.

A fourth factor is the time of year during which the survey took place. A number of units, particularly those in the Reserve Component, reported that their TEC use is relatively low during the months of October and November due to field exercises. Also, the sample period included the Thanksgiving holiday, during which TEC use in the Active Component was nil.

ESTIMATES OF USE BY LESSON SERIES

It is of some interest from the standpoint of lesson production and distribution to explore the use rates of individual TEC lesson series. These were determined for each combat arm among FORSCOM battalions and for all TRADOC activities.

To determine total uses of a given lesson series, numbers of uses represented by each form bearing a number within that series were summed across forms. TEC use by lesson series is found in Table 6. Uses found in combat arm schools are included in "TRADOC" totals in Table 6. However, they are also shown in parentheses beside the appropriate combat arm total.

REPEATED USE OF THE SAME LESSON

Individual TEC users were asked how often they had used the same lesson before. Results are reported in Table 7. It can be seen from this table that most users (64.9%) had not used the lesson previously. A larger percentage (76.3%) of the TRADOC user sample reported never having used the lesson before than those found in the AC (70.5%) or RC (53.1%) samples. Among FORSCOM units artillery showed the lowest percentage of non-repeated use followed by Armor, Infantry, and ADA. Among TRADOC activities, ADA

Table 6 - TEC Use by Lesson Series and Combat Arm/Activity

(Page 1 of 5)

		FORSCOM			TRADOC
TEC Lesson Series	ADA	Armor	Artillery	Infantry	Other
Call for Fire and Adjustment	101(67)[a]	215(13)	117(10)	1332(28)	437
Cover, Camouflage, and Concealment	141(24)	958(1)	178(2)	2720(12)	269
Early Warning Devices	0(3)	311	36	43	3
Nuclear, Biological, and Chemical	256(70)	533	67	492(9)	142
Communications	97(404)	463(11)	891(28)	518(5)	666
TEC	141(7)	90	42(1)	88(25)	46
Tube Artillery	0	82	384(5)	0	6
Surveyed Firing Charts	0	36(3)	663(9)	0	14
Vertical Operator	0	0	215	0	0
FDC Computer Records	0	0	200(5)	0(2)	11
Precision Registration	0	1	109(5)	0(5)	10
Registration Fire Mission	0	3	82(5)	0(2)	9
MET Plus VE Computations	0(3)	0	297(3)	0(6)	12
Hand Grenades	2(2)	908	521	1210(4)	6
Law	55(7)	424(20)	173	1688(3)	43
Rifles	69(1)	362	1778(3)	1249(4)	28

[a]Numbers in parentheses indicate lessons used by the school for that combat arm. These counts are reflected in the TRADOC totals.

Table 6 - TEC Use by Lesson Series and Combat Arm/Activity

(Page 2 of 5)

TEC Lesson Series	FORSCOM				TRADOC
	ADA	Armor	Artillery	Infantry	
Land Navigation	330(3004)[a]	1555(121)	172(4)	4751(546)	4214
Tow Missile	0	0	0	20	0
Leadership and Motivation	61(2416)	613(3)	656(7)	1051(17)	2556
Night Vision Devices	106(27)	699	0	1370	1393
Obstacles	40	110(9)	121	2108(3)	14
Machineguns, M60	186(30)	549(48)	506(2)	2353(3)	132
M203 Grenade Launcher	15(6)	27	702(3)	1612(11)	24
Military Instructor Training	0	0	0	0	1
Mines, Claymore	30(26)	315	43	1006	1381
Squad Radio	0(56)	54	2(1)	1004	1441
Intelligence and Counter-intelligence	1(3)	842(1)	83	860(2)	18
Mortar FDC	0	538(11)	0(1)	2814(26)	38
Mortars	0	23	0	13	0
Engine	0	0	0	1	0
TAMMS	78(25)	196	620	346(2)	50
Communications (Ratt Operator Only)	0(3)	74(17)	4	84(1)	420
M551/M60A2 Ammunition	0	117(8)	0	11	8

[a]Numbers in parentheses indicate lessons used by the school for that combat arm. These counts are reflected in the TRADOC totals.

Table 6 - TEC Use by Lesson Series and Combat Arm/Activity

(Page 3 of 5)

	FORSCOM				TRADOC
TEC Lesson Series	ADA	Armor	Artillery	Infantry	
Bridge Classification	0	4	0	0	0
M551 Gun Launcher	0	13(5)[a]	0	0(1)	6
Target Acquisition for Tankers	0	221(8)	0(1)	0(6)	15
M551 Fire Controls	0	313(14)	0(22)	0(2)	38
Preparing to Fire - M551	0(1)	94(1)	0(2)	0	4
M551 Target Engagement	0	10	0	4	0
Range Cards	0	879(26)	0	1	26
M105 Tank Ammunition	0	297(7)	0	0	9
Auxiliary Fire Controls	0	516	0	0	0
Fire Controls: M60/M60A1	0	595(37)	0(1)	0	44
105mm Main Gun Operations	0	317(4)	0	0	4
Preparing to Fire: M60/M60A1	0	897(51)	0(8)	0(2)	61
Target Engagement: M60/M60A1/M6043	0	362(16)	1(3)	0	39
Maintenance: M60/M60A1	0	1359(30)	0	0	30
Wheeled Vehicles	46(1)	4(11)	126(3)	470	15
First Aid	144	1422	148(5)	2159(11)	44
Personal Hygiene	110	149	224	1580(1)	1

[a]Numbers in parentheses indicate lessons used by the school for that combat arm. These counts are reflected in the TRADOC totals.

Table 6 - TEC Use by Lesson Series and Combat Arm/Activity

(Page 4 of 5)

	FORSCOM				TRADOC
TEC Lesson Series	ADA	Armor	Artillery	Infantry	
Aircraft Recognition	0	0	0	2	0
Air Defense Command and Control	0	0(14)[a]	0(1)	0(2)	25
TADDS	117	0	0	0	3
Vulcan Maintenance	257(72)	0	0(15)	0	91
Vulcan Crew Drill	198(266)	0	0	0	266
Vulcan Ammunition	18	0	0	0	0
Chaparral Maintenance	32(250)	0(3)	0	0	38
Chaparral Crew Drill	14(178)	0	0	0(1)	179
Redeye	0(15)	0	0	0	15
TEC for Green Tabbers	5	2(1)	217	260(1)	3
Ratt Operator Audio Only Lessons	0	0(16)	5(53)	0(8)	77
Armor Branch Audio Only Lessons	0	239	0(8)	0(1)	15
M48 Lessons for use by Reserve and/or NG Units	0	62	0	0	0
All Soldiers Audio Only Lessons	96	18(1)	51(17)	158	18
ADA Branch Audio Only Lessons	0(65)	0	0	0	65
All Soldiers Printed Text	0	0	2	5	0

[a]Numbers in parentheses indicate lessons used by the school for that combat arm. These counts are reflected in the TRADOC totals.

Table 6 - TEC Use by Lesson Series and Combat Arm/Activity

(Page 5 of 5)

	FORSCOM				TRADOC
TEC Lesson Series	ADA	Armor	Artillery	Infantry	
Ratt Operator Printed Text	0	0	0	0	456
Area Fire Mission	0	0	3	0	0
Armored Vehicle Recognition	0	0	7	0	0

Table 7. Frequency of Repeated Use of the Same TEC Lesson by Activity

Type of Activity	Frequency of Repeated Use		
	Never	Once	More than once
Active Component			
ADA	137(79.2)[a]	20(11.6)	16(9.2)
Armor	96(70.1)	25(18.2)	16(11.7)
Artillery	170(53.3)	81(25.4)	68(21.3)
Infantry	666(74.9)	62(7.0)	161(18.1)
Other	4(100.0)	0	0
Total	1073(70.5)	188(12.4)	261(17.1)
Reserve Component			
ADA	76(84.4)	7(7.8)	7(7.8)
Armor	112(53.1)	54(25.6)	45(21.3)
Artillery	532(48.1)	380(34.4)	194(17.5)
Infantry	461(56.4)	151(18.5)	206(25.2)
Other	2(66.7)	1(33.3)	0
Total	1183(53.1)	593(26.6)	452(20.3)
TRADOC			
ADA School	51(45.5)	18(16.1)	43(38.4)
Armor School	213(69.8)	20(6.6)	72(23.6)
Artillery School	146(57.5)	24(9.4)	84(33.1)
Infantry School	122(60.1)	26(12.8)	55(27.1)
Other	1158(86.3)	49(3.7)	135(10.1)
Total	1690(76.3)	137(6.2)	389(17.6)
TOTAL	3946(64.9)	918(15.1)	1102(18.1)

[a]Numbers in parentheses indicate the percentages of total uses for the combat arm and component represented by the corresponding number.

users had the lowest percentage of non-repeated use.

CHARACTERISTICS OF USERS

a. Pay Grade. TEC Users completing Individual TEC Usage Forms were asked to indicate their pay grades and MOSs. Group users were asked to indicate the MOS most commonly held among group members and the approximate percentage of group members holding that MOS. These pieces of information allowed analyses of TEC uses by characteristics of users.

Numbers of Individual TEC uses are reported by pay grade in Table 8.[10] Within the Active Army, most uses were found at the E5 and E6 levels. Taken together, uses at those pay grades represented 60.6% of all uses. Within the Reserve Component, highest levels of use were found in grades E4 (21%) and E5 (20.5%). The highest remaining levels of use were found at the E6 (11.3%), E7 (10.6%) and 03 (12.4%) levels.

b. MOS. The breakdown of TEC uses by MOS (Table 9) showed the greatest numbers of uses to have occurred in the 11 (B,C,D,E), 13 (A,B,E) and 16 (F,R) series. Moderately high numbers of uses were also found in MOSs 1B, 36K, 63B, 63C and 91B. These figures may partially reflect MOS densities within the combat arms.

It should be noted that a number of TEC group uses (4608) were omitted from Table 9. These were uses reported on forms where the group leader reported less than 50% of the group to hold a common MOS.

c. Average Monthly TEC Use. TEC users completing TEC Individual Use Forms were asked to indicated the average number of TEC lessons they used per month (on a scale of 0-9 or more). Results of this self-reported estimate are shown in Table 10. The average number reported (2.8) is a great deal higher than the estimated average use per man per month shown in Table 3. One reason for this discrepancy may be that the estimated average shown in Table 2 is the result of the division of all known TEC uses by the total (estimated) number of men in the battalion (both users and non-users). The Table 10 figures are reports of a self-selected subgroup of soldiers who completed the form because they used TEC on an individual basis at least once during the sampling period. One would expect that this group of known individual users would have a higher average monthly use rate than the average battalion soldier.

[10] Individual TEC uses included some groups of 2-5 individuals. Where only one user completed a form to represent the whole group, his pay grade may be over represented in the distribution. However, comparison of the percentage distribution of uses by pay grade in Table 8 with a comparable distribution of "true" individual users (who used TEC alone) shows no major discrepancies.

Table 8. Individual TEC Uses by Pay Grade, Combat Arm and Component

(Page 1 of 2)

Pay Grade	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
Active Component					
E1			22(6.9)	7(.8)	29(1.9)
E2		31(22.6)	63(19.6)	15(1.7)	109(7.1)
E3	36(19.7)[a]	5(3.6)	38(11.8)	21(2.4)	100(6.5)
E4	37(20.2)	14(10.2)	84(26.2)	38(4.3)	173(11.3)
E5		52(37.9)	45(14.0)	455(51.0)	552(36.0)
E6	42(23.0)	4(2.9)	24(7.5)	308(34.5)	378(24.6)
E7	16(8.7)	6(4.4)	36(11.2)	12(1.3)	70(4.6)
E8		3(2.2)	3(.9)	2(.2)	8(.5)
01	20(10.9)	10(7.3)	4(1.2)		34(2.2)
02	20(10.9)		2(.6)	3(.3)	25(1.6)
03		4(2.9)		7(.8)	11(.7)
04	12(6.6)	2(1.5)		7(.8)	21(1.4)
05		6(4.4)		9(1.0)	15(1.0)
08				9(1.0)	9(.6)
Total	183	137	321	893	1534
Reserve Component					
E1			11(1.0)	8(1.0)	19(.8)
E2			23(2.0)	22(2.7)	45(2.0)
E3	1(1.1)	1(.5)	17(1.5)	59(7.2)	78(3.4)
E4	8(8.9)	30(14.2)	110(9.6)	327(40.1)	475(21.0)
E5	37(41.1)	48(22.7)	256(22.3)	123(15.1)	464(20.5)
E6	27(30.0)	14(6.6)	127(11.1)	88(10.8)	256(11.3)
E7	16(17.8)	41(19.4)	100(8.7)	82(10.1)	239(10.6)
E8	1(1.1)	56(26.5)	46(4.0)	11(1.3)	114(5.0)
E9		1(.5)	1(.1)	1(.1)	3(.1)

Note. Uses missing: 99.

[a] Numbers in parentheses indicate percentages of total uses for combat arm and component represented by the corresponding number.

Table 8. Individual TEC Uses by Pay Grade, Combat Arm and Component

(Page 2 of 2)

Pay Grade	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
W2				9(1.1)	9(.4)
W4		3(1.4)		3(.4)	6(.3)
01		1(.5)	161(14.2)	8(1.0)	72(3.2)
02		4(1.9)	32(2.8)	20(2.5)	56(2.5)
03		8(3.8)	221(19.3)	52(6.4)	281(12.4)
04		4(1.9)	10(.9)	1(.1)	15(.7)
05			24(2.1)		24(1.1)
07			5(.4)	1(.1)	6(.3)
Total	90	211	1146	815	2262

Note. Uses missing: 99.

[a] Numbers in parentheses indicate percentages of total uses for combat arm and component represented by the corresponding number.

Table 9. TEC Uses by MOS of Users and Combat Arm

(Page 1 of 3)

MOS	Combat Arm				
	ADA	Armor	Artillery	Infantry	Other
1B				409	
5C		2			
5F		3	8		
9B			10	3	
10B				6	
10E		5			
11B		2021	20	16408	304
11C		657	19	5439	
11D		1315	2	124	
11E		8507	229		
11F		1	3		
12B			6		1
120			3		
13A			309		
13B		1	2628		
13E		81	1500		
13G			40		
13W			6		
13Y			14		
16A	33				
16F	1069				
16H	7				
16J	17				
16P	32				
16R	661				
17B		5	2		
17K		11	2	20	29
24C		2			

Note. Uses missing: 6933. Uses where less than 50% of using group held a common MOS: 4608.

Table 9. TEC Uses by MOS of Users and Combat Arm

MOS	Combat Arm				
	ADA	Armor	Artillery	Infantry	Other
31B	1	46		46	
31G		61	44		
32F			1		
36C	68				
36G	1				
36K	112	1	384	226	15
44B				1	
52B				3	
54E		1		4	
63A		2			
63B	128			98	
63C	44	105	192	97	
63F				1	
63H				3	
63J				1	
64B				4	
64C		48	30	1	
67V		35			
71B		1			
71D			1		
71L			2		
75B	1		4		
75C				5	
75D				17	
75Y			1	1	
76D			2		
76J				57	
76P			1		
76W			2		
76Y		2	20	32	

Note: Uses missing: 6933. Uses where less than 50% of using group held a common MOS: 4608.

Table 9. TEC Uses by MOS of Users and Combat Arm

(Page 3 of 3)

MOS	Combat Arm				
	ADA	Armor	Artillery	Infantry	Other
82C			31		
86K			1		
91B	10	361	75	125	
91C		1			
94B		15	19	12	
95B		4	7	57	
95C				120	
96B				3	

Note: Uses missing: 6933. Uses where less than 50% of using group held a common MOS: 4608.

Table 10 - Average Monthly Use of TEC Per Individual by Combat Arm and Component

Combat Arm	Component		
	Active	Reserve	Total
Air Defense Artillery	5.7 (9)[a]	1.5 (24)	2.7 (33)
Armor	2.2 (51)	3.0 (102)	2.7 (153)
Artillery	2.7 (192)	2.0 (73)	2.5 (265)
Infantry	3.3 (48)	3.0 (193)	3.0 (241)
Total	2.8 (300)	2.7 (392)	2.8 (692)

[a]Numbers in parentheses indicate numbers of individual usage forms used in computation.

REASONS FOR USE

Both individual and group TEC users were questioned as to their purposes for using the TEC lesson. Several possible reasons for use were listed on each form and users were given space on the form to list other reasons for use if those listed were not applicable.

TEC group uses (Table 11) in the Active Component were most often for the purpose of refresher training. All uses among Active Artillery groups were for this purpose as were almost all (92.0%) Active Armor and the majority of Active ADA (63.8%) and "Other" combat arm (60.0%) uses. Active Infantry uses were fairly evenly split between refresher training (46.9%) and initial training (48.5%).

Most Reserve Component uses were again for refresher training (65.6%). These included large majorities of Armor (80.5%) and Artillery (79.5%) uses and over half (57.3%) of the Infantry uses. Reserve ADA and "Other" combat arms had much smaller concentrations of use for refresher training (28.1% and 20.2%, respectively). In both these groups, most uses were for purposes other than those listed.

Among TRADOC activities, most uses (66.9%) were for the purpose of initial training. This appears to be primarily due to the large percentages of ADA School (92.2%) and Infantry School (90.9%) uses for this purpose. However, only 9 (2.5%) of the Armor School uses were for the purpose of initial training. Most uses there were for purposes other than those listed.

Other purposes of use listed by Active Component groups were: SQT study, 804; ARTEP training, 117; concurrent training, 50; mandatory requirements, 1650; and classes on TEC use, 99. Purposes of TEC Group use listed by TRADOC activities included: SQT, 726; introduction to TEC, 40; and course requirements (of BNCOC, PNCOC, NCOA, etc.), 5416. Reserve Component groups also listed SQT, 1440; and concurrent training, 160. Other purposes named by them were: maintenance training and preparation, 389; map reading classes, 384; training management school, 390; field use, 278; transition training, 70; MOS training, 1488; OJT, 178; medical section training, 12; communications section training, 193; recruit training, 42; NCO school, 93; FDC section training, 105; preparation for ESC, 572; ROTC instructor program, 70; unit training (general subjects), 548; and general training, 2071.

It is not suprising that most TRADOC uses were for initial training since this category comprised a number of school activities where most initial training occurs, while most TEC group uses in the units were for the purpose of refresher training of skills probably initially learned in a school setting.

Most Individual TEC uses (Table 12) were also for the purposes of initial (37.1%) and refresher (21.6%) training. The largest numbers of

Table 11. TEC Group Uses by Purpose of Use, Activity and Combat Arm

Type of Activity	Purpose of Use			
	Initial Training	Refresher Training	Individual Study	Other
Active Component				
ADA	0	486(63.8)	216(28.3)	60(7.9)
Armor	89(2.0)[a]	4029(92.0)	0	262(6.0)
Artillery	0	283(100.0)	0	0
Infantry	3435(48.5)	3324(46.9)	35(.5)	295(4.2)
Other	32(39.5)	49(60.5)	0	0
Total	3556(28.2)	8171(64.9)	251(2.0)	617(4.9)
Reserve Component				
ADA	325(17.8)	513(28.1)	0	989(54.1)
Armor	2166(16.8)	10381(80.5)	67(.5)	281(2.2)
Artillery	1220(16.2)	5989(79.5)	83(1.1)	242(3.2)
Infantry	1872(8.3)	12874(57.3)	5315(23.7)	2404(10.7)
Other	5(.5)	186(20.2)	33(3.6)	696(75.7)
Total	5588(12.2)	29943(65.6)	5498(12.0)	4612(10.1)
TRADOC				
ADA School	6195(92.2)	234(3.5)	0	287(4.3)
Armor School	9(2.5)	80(22.6)	0	265(74.9)
Artillery School	0	0	0	0
Infantry School	500(90.9)	50(9.1)	0	0
Other	1700(34.4)	1256(25.4)	0	1981(40.1)
Total	8404(66.9)	1620(12.9)	0	2533(20.2)
Total	17548	39734	5749	7762

[a]Numbers in parentheses indicate the percentage of total uses for that combat arm and type of activity represented by the corresponding number.

Table 12. Individual TEC Uses by Purpose of Use, Activity and Combat Arm

(Page 1 of 2)

Purpose of Use	Combat Arm					
	ADA	Armor	Artillery	Infantry	Other	Total
Preparation for MOS/SQT						
AC	17(9.8)[a]	24(19.4)	1(.3)	134(15.7)	4(100.0)	180(12.2)
RC	15(17.0)	17(8.4)	12(1.2)	7(.9)	0	51(2.4)
TRADOC	22(32.4)	56(18.4)	53(21.3)	34(18.3)	144(11.0)	309(14.6)
Total	54(16.4)	97(15.3)	66(4.2,	175(9.5)	148(11.2)	540(9.5)
Preparation for Promotion Board						
AC	0	5(4.0)	22(7.0)	4(.5)	0	31(2.1)
RC	1(1.1)	0	1(.1)	8(1.0)	0	10(.5)
TRADOC	0	0	4(1.6)	6(3.2)	4(.3)	14(.7)
Total	1(.3)	5(.8)	27(1.7)	18(1.0)	4(.3)	55(1.0)
Initial Training in Needed Skill						
AC	36(20.7)	6(4.8)	59(18.7)	414(48.5)	0	515(35.0)
RC	4(4.5)	2(1.0)	279(27.9)	169(21.3)	0	454(21.8)
TRADOC	6(8.8)	39(12.8)	76(30.5)	21(11.3)	994(75.8)	1136(53.6)
Total	46(13.9)	47(7.4)	414(26.5)	604(32.9)	994(75.4)	2105(37.1)
Refresher Training for Duty Position						
AC	28(16.1)	50(40.3)	106(33.5)	128(15.0)	0	312(21.2)
RC	35(39.8)	54(26.6)	261(26.1)	293(36.9)	1(33.3)	644(30.9)
TRADOC	8(11.8)	56(18.4)	74(29.7)	76(40.9)	54(4.1)	268(12.6)
Total	71(21.5)	160(25.3)	441(28.2)	497(27.1)	55(4.2)	1224(21.6)
Interest in Subject Matter						
AC	38(21.8)	33(26.6)	104(32.9)	31(3.6)	0	206(14.0)
RC	23(26.1)	63(31.0)	79(7.9)	152(19.1)	2(66.7)	319(15.3)
TRADOC	6(8.8)	39(12.8)	40(16.1)	22(11.8)	24(1.8)	131(6.2)
Total	67(20.3)	135(21.4)	223(14.3)	205(11.2)	26(2.0)	656(11.6)

[a]Numbers in parentheses indicate the percentages of total uses for that combat arm and type of activity represented by the corresponding number.

Table 12. Individual TEC Uses by Purpose of Use, Activity and Combat Arm

(Page 2 of 2)

Purpose of Use	Combat Arm					
	ADA	Armor	Artillery	Infantry	Other	Total
Unit Training Required by Superior						
AC	30(17.2)	6(4.8)	21(6.6)	9(1.1)	0	66(4.5)
RC	0	30(14.8)	295(29.5)	106(13.4)	0	431(20.7)
TRADOC	2(2.9)	12(3.9)	1(.4)	4(2.2)	30(2.3)	49(2.3)
Total	32(9.7)	48(7.6)	317(20.3)	119(6.5)	30(2.3)	546(9.6)
Other						
AC	25(14.4)	0	3(.9)	134(15.7)	0	162(11.0)
RC	10(11.4)	37(18.2)	72(7.2)	59(7.4)	0	178(8.5)
TRADOC	24(35.3)	103(33.8)	1(.4)	23(12.4)	62(4.7)	213(10.0)
Total	59(17.9)	140(22.2)	76(4.9)	216(11.8)	62(4.7)	553(9.7)
Total	330	632	1564	1834	1319	5679

[a]Numbers in parentheses indicate the percentages of total uses for that combat arm and type of activity represented by the corresponding number.

TRADOC (53.6) and Active Component (35.0%) uses were for initial training and the largest numbers of Reserve Component (30.9%) uses were for refresher training. Remaining uses were somewhat evenly spread across other purposes except for promotion board preparation. Very few uses (1.0%) were for this purpose.

Additional purposes of use listed by Active Component Individual users were: secondary MOS study, 6; PNCOC, 30; platoon training for ARTEP, 3; instructor preparation, 8; reclassification, 195; and Soldier of the Month Board, 3.

Reserve Component Individual users listed other reasons as: preparation or preview for instruction, 302; preparation for testing, 7; State OCS, 24; cross training, 25; reclassification, 2; and training management workshops, 65.

PATTERNS OF USE

One question of interest regards the number of individuals using a lesson (or lesson series) during the period the lesson is checked out. Of all TEC uses recorded, only 8.10% (6.68% FORSCOM; 16.52% TRADOC) were recorded on Individual Usage Forms. Thus, 91.9% of uses occurred in groups. Among FORSCOM uses, only 32.85% of those recorded as Individual were by a single soldier rather than a small, informal group of size 2 - 5.

In Table 13, percentages of all recorded FORSCOM Group uses are shown by size of the using group. As shown, use frequencies are scattered across groups of many sizes with the largest percentages of use being by groups of 100 or more soldiers.

It should be noted that, if one considers FORSCOM instances of use, the check-out of part of a lesson series for use by any number of individuals (the completion of one usage form), the picture is very different. AC instances of use are predominantly Individual (71.79%) while just less than half (41.89%) of RC instances of use are Individual. Given the high overall TEC use rate in the RC along with the limited amount of training time available, the greater number of instances of Group TEC use is not surprising.

Since TEC Group Usage Forms could be used where lessons were taken out of the center, a single group form could reflect use of TEC in several different groups over time. Because only the total number of users was recorded on the form, some percentages may include instances of use by several smaller groups during a single checkout period as well as by single groups of the size indicated.

Other results indicate that when TEC is used in the group mode, users most often must share a Beseler CUE-SEE with one or more other individuals.

Table 13. TEC Group Use by Group Size

Number in Group	Component	
	Active	Reserve
1-5	10.6	7.1
6-9	.7	3.3
10-19	6.6	12.7
20-29	13.9	11.7
30-39	6.8	8.1
40-49	1.6	7.1
50-59	1.4	5.5
60-69	8.5	9.3
70-79	4.7	8.6
80-89	11.4	2.9
90-99	1.5	1.6
100+	32.4	22.1

Note. Numbers reflect percentages of total TEC group uses.

As shown in Table 14, in an overwhelming number of TEC group uses in all combat arms and components more than one person was using each Beseler.

As shown in Table 15, the TEC lesson was also projected from the rear of the Beseler in most (74.9%) Group uses. This probably accounts for the major portion of cases in Table 14 where more than one person per Beseler was indicated. However, further analysis would be required to estimate more exactly how many Group uses occurred where several individuals directly viewed one CUE-SEE as opposed to the entire group viewing a projected TEC lesson.

Group users were also asked whether the materials which were the subject of lesson content were available for use with the TEC lesson. Results are shown in Table 16. For the total sample materials were available 63.7% of uses. In the Active Component, content materials were available for most uses in ADA (67.1%), Armor (89.5%), Infantry (70.5%), and "Other" combat arms (100.0%). However, in Artillery, materials were available for only 9.5% of uses.

Reserve Component uses showed a different pattern, however. Artillery had materials available for most (89.5%) uses. Materials were available for smaller percentages of uses in ADA (21.2%), Infantry (50.1%) and "Other" combat arms (77.3%) than for the comparable Active Component groups. The percentages of uses for which materials were available in Armor (81.2%) was similar to that found in the Active Armor category. The pattern for TRADOC uses was again different with content materials available for only 17.5% of Armor School uses, 39.8% of ADA School uses, 55.5% of "Other" activity uses, and all Infantry School uses. There were no Artillery School group uses.

Both Individual and Group TEC users were asked whether use occurred on- or off-duty and whether it was voluntary or mandatory. Results for on off-duty use are shown in Table 17. Very few uses, only 705 (11.9%) Individual uses and 2182 (3.4%) Group uses, occurred off-duty. The only category having more off- than on-duty uses was that of Armor School Individual users.

Results for voluntary/mandatory uses, presented in Table 18, are quite consistent across combat arms and activity types. Most Individual uses were voluntary and most Group uses were mandatory. The only groups showing exceptions to this were Reserve Component "Other" combat arms where there were slightly more voluntary than mandatory group uses and "Other" TRADOC activities where there were over 3 times as many mandatory as voluntary individual uses.

Finally, both Group and Individual users were questioned about use of the LAI pretest with the TEC lesson. Since the answer format was different on Group and Individual forms, results are presented separately.

Table 14. TEC Group Uses by Number of Persons per Beseler/Cassette, Activity and Combat Arm

Persons per Beseler	Combat Arm					
	ADA	Armor	Artillery	Infantry	Other	Total
Active Component						
One	0	26	0	76	0	102
More than One	762	3627	242	6583	49	11263
Reserve Component						
One	0	60	9	662	0	731
More than One	1804	11022	7447	16683	748	37704
TRADOC						
One	14	0	0	0	1	15
More than One	4086	354	0	50	3407	7897
Total						
One	14	86	9	738	1	848
More than One	6652	15003	7689	23316	4204	56864

Table 15. TEC Group Uses by Mode of Lesson Use, Activity and Combat Arm

Type of Activity	Lesson Was: Audio	Viewed Directly	Projected
Active Component			
ADA	0	240(31.5)	522(68.5)
Armor	0	604(13.8)	3776(86.2)
Artillery	0	26(9.2)	257(90.8)
Infantry	0	4134(58.3)	2955(41.7)
Other	0	0	81(100.0)
Total	0	5004(39.7)	7591(60.3)
Reserve Component			
ADA	0	17(.9)	1810(99.1)
Armor	602(4.7)	1600(12.5)	10639(82.9)
Artillery	3(.04)	1079(14.1)	6580(85.9)
Infantry	170(.8)	6351(28.3)	15944(71.0)
Other	0	179(19.5)	741(80.5)
Total	775(1.7)	9226(20.2)	35714(78.1)
TRADOC			
ADA School	0	1255(18.3)	5600(81.7)
Armor School	0	169(47.7)	185(52.3)
Artillery School	0	0	0
Infantry School	0	50(9.1)	500(90.9)
Other	0	1399(28.1)	3578(71.9)
Total	0	2873(22.6)	9863(77.4)
Total	775(1.1)	17103(23.9)	53390(74.9)

[a]Numbers in parentheses indicate percentages of total uses for the combat arm and type of activity represented by the corresponding number.

Table 16. TEC Group Uses by Availability of Content Materials, Type of Activity and Combat Arm

Content Materials Available?	Combat Arm				
	ADA	Armor	Artillery	Infantry	Other
Active Component					
Yes	330(67.1)[a]	3873(89.5)	26(9.2)	4857(70.5)	81(100.0)
No	162(32.9)	454(10.5)	257(90.8)	2029(29.5)	0
Reserve Component					
Yes	382(21.2)	10134(81.2)	6813(89.5)	11072(50.1)	711(77.3)
No	1420(78.8)	2345(18.8)	802(10.5)	11023(49.9)	209(22.7)
TRADOC					
Yes	2714(39.8)	62(17.5)	0	550(100.0)	2698(55.5)
No	4113(60.2)	292(82.5)	0	0	2160(44.5)
Total					
Yes	3426(37.6)	14069(82.0)	6839(86.6)	16479(55.8)	3490(55.3)
No	5695(62.4)	3091(18.0)	1059(13.4)	13052(44.2)	2369(44.7)

[a]Numbers in parentheses indicate percentages of total uses for that combat arm and component represented by the corresponding number.

Table 17. TEC Uses by Type of Use, Time of Use, Activity and Combat Arm

	Individual		Group	
Type of Activity	On-Duty	Off-Duty	On-Duty	Off-Duty
Active Component				
ADA	158	20	612	150
Armor	123	12	4310	70
Artillery	303	16	237	--
Infantry	832	50	6835	227
Other	4	--	81	--
Total	1419	88	12075	447
Reserve Component				
ADA	50	40	1695	100
Armor	138	73	12489	280
Artillery	1004	102	7437	6
Infantry	742	75	20831	981
Other	2	1	364	516
Total	1937	291	42816	1883
TRADOC				
ADA School	102	8	3305	0
Armor School	115	190	354	0
Artillery School	240	13	0	0
Infantry School	140	59	550	0
Other	1282	57	3183	104
Total	1879	327	7392	104
Total	5229	705	61796	2182

Table 18. Voluntary and Mandatory TEC Uses by Activity and Combat Arm

Activity	Individual		Group	
	Voluntary	Mandatory	Voluntary	Mandatory
Active Component				
ADA	115	68	306	456
Armor	130	7	1200	3109
Artillery	261	58	250	33
Infantry	649	239	779	6310
Other	4	0	0	49
Total	1159	372	2535	9957
Reserve Component				
ADA	85	2	114	1713
Armor	167	42	1063	10775
Artillery	715	423	887	6595
Infantry	681	135	6756	15321
Other	2	1	516	404
Total	1650	603	9336	34818
TRADOC				
ADA School	97	15	22	5582
Armor School	304	1	145	209
Artillery School	255	0	0	0
Infantry School	194	7	25	525
Other	313	1029	305	4376
Total	1163	1052	497	10692
Total	3972	2027	12368	55679

Results for Individual users, Table 19, show a great deal of variation among groups. In the Active Component roughly half (49.2 - 57.7%) the uses in each combat arm also involved pretest use. The exception was Infantry where the pretest was used in 69.8% of the cases of lesson use. In the Reserve Component, only 11.1 - 34.3% of uses involved pretest use except in Artillery where the pretest was used in 82.5% of the instances of lesson use. Among TRADOC activities, the pretest was used with as many as 90.2% (Armor School) of uses and as few as 7.0% (Infantry School).

Results for Group users, Table 20, again show a great deal of variability among groups. Among Active Component users, most ADA uses (78.7%) occurred where the entire group used the pretest. Most Artillery (88.3%) and Infantry (78.9%) uses occurred where no one in the group used the pretest. Armor uses were more evenly spread across levels of pretest use, but none of the group used the pretest in almost half (48.0%) of the uses.

In the Reserve Component groups, somewhat over half (54.9 - 61.4%) of the uses in Armor, Artillery and Infantry involved no pretest use. "Others" most often reported uses where some of the group used the pretest (67.1%) and most ADA uses were spread across the "most" (32.3%), "some" (28.0%), and "none" (36.5%) categories.

TRADOC uses showed pretest use by some of the group in all ADA School uses and by most of the group in 90.9% of the Infantry School uses. Armor uses were most concentrated in the "most" (45.2%) and "none" (38.7%) categories and "Other" activity uses were most concentrated in the "all" (43.6%) and "none" (32.9%) categories.

LOCATIONS OF USE

TEC lesson custodians were asked to indicate the type and level of facility from which the lesson was obtained and/or in which the lesson was used on both Group and Individual Usage Forms. The analysis of responses to this question provided an indication of those types and levels of facilities where TEC lessons are most likely to be obtained and/or use is most likely to occur in a CONUS, FORSCOM battalion. TRADOC activities were not included in analysis because TEC facilities were presumed to be unique to the type of activity.

Individual and Group TEC uses are shown by level of facility in Table 21. Among Active Component units, most Individual (715) and Group (8001) TEC uses were with lessons obtained at the battalion level. The levels of facilities second most frequently used were brigade for Individual uses (583) and company/battery for Group uses (3876).

Among Reserve Component units, most Individual uses (1126) were with lessons obtained at the battalion level and most Group uses (24999) were with lessons obtained at the company/battery level.

Table 19. Individual TEC Uses with Pretest by Activity and Combat Arm

Type of Activity	Combat Arm				
	ADA	Armor	Artillery	Infantry	Other
Active Component	93(54.4)[a]	79(57.7)	157(49.2)	616(69.8)	0
Reserve Component	10(11.1)	37(17.6)	933(82.5)	279(34.3)	0
TRADOC	37(33.3)	275(90.2)	110(43.1)	84(7.0)	78(12.6)

[a] Tabled numbers represent only those uses where the LAI pretest was included. Beside each number, in parentheses, is shown the percentage of total uses for that combat arm and activity that the number represents.

Table 20. Group TEC Uses by Extent of Pretest Use, Activity and Combat Arm

Type of Activity	Frequency of Users in Group Using Pretest			
	All	Most	Some	None
Active Component Unit				
ADA	600(78.7)[a]	36(4.7)	0	126(16.5)
Armor	913(21.4)	686(16.1)	615(14.4)	2046(48.0)
Artillery	33(11.7)	0	0	250(88.3)
Infantry	420(5.9)	637(9.0)	441(6.2)	559(78.9)
Other	49(60.5)	0	0	32(39.5)
Reserve Component Unit				
ADA	60(3.3)	589(32.3)	511(28.0)	667(36.5)
Armor	1774(14.1)	758(6.0)	2361(18.7)	7702(61.2)
Artillery	627(8.2)	1723(22.6)	599(7.8)	4686(61.4)
Infantry	5044(22.5)	3022(13.5)	2058(9.2)	12303(54.9)
Other	0	0	537(67.1)	263(32.9)
TRADOC Activity				
ADA School	0	0	6853(100.0)	0
Armor School	48(13.6)	160(45.2)	9(2.5)	137(38.7)
Artillery School	0	0	0	0
Infantry School	0	500(90.9)	0	50(9.1)
Other	2169(43.6)	981(19.7)	187(3.8)	1635(32.9)
Total	11717(16.6)	9050(12.8)	14435(20.4)	35488(50.2)

[a]Numbers in parentheses indicate percentage of uses for combat arm and component represented by the corresponding number.

Table 21. TEC Uses by Level of Facility, Component and Combat Arm

(Page 1 of 2)

Level of Facility	Combat Arm					
	ADA	Armor	Artillery	Infantry	Other	Total
Individual						
Active Component						
Company/Battery	183	2		65	4	254
Battalion/Squadron	177	59	319	170		725
Brigade		4		579		583
Division				57		57
Post		18		9		27
Other		61				61
Reserve Component						
Company/Battery	73	99	148	542	3	865
Battalion/Squadron		100	880	246		1226
Brigade						
Division						
Post						
Other		5	9	18		32
Group						
Active Component						
Company/Battery	126	2169		1532	49	3876
Battalion/Squadron	561	948	935	5557		8001
Brigade	45				32	77
Division						
Post						
Other	166					166

Note. Uses missing, Individual: 234, Group: 1974.

Table 21. TEC Uses by Level of Facility, Component and Combat Arm

(Page 2 of 2)

Level of Facility	Combat Arm					
	ADA	Armor	Artillery	Infantry	Other	Total
Reserve Component						
Company/Battery	1588	10586	2241	11222	404	26041
Battalion/Squadron		2069	5323	8875	516	16783
Brigade						
Division						
Post						
Other	1149	44	102	1922		3217

Note: Uses missing, Individual: 234, Group: 1974.

Other levels of facilities listed as used by respondents were platoon (120) for the Active Component; and detachment (768) platoon (2279), USAR center (2), section (23), and troop (25) for the Reserve Component.

Types of facilities used for Individual and Group TEC study are shown in Table 22. As would be expected, most Active Component uses, both Group (7334) and Individual (1138), were with lessons obtained in a learning center; and most Reserve Component uses, Group (37894) and Individual (1896), occurred with lessons from a National Guard Armory.

As shown in Table 22, several other types of facilities listed were also used, and in addition to those listed on the form, users named a number of facility types. These were, for Active Component, Individual users: TEC Libraries, 49; S-3's, 442; company training rooms, 109. Active Component Group facilities named were: Classrooms, 2427; company training (rooms), 190; platoon training (rooms), 1770; tank ranges, 660; squad rooms, 28; gymnasiums, 150; section training (rooms), 1450; CO classes, 72.

Reserve Component Individual users listed: USAR Centers, 30; Recruiting School, 3; section rooms, 84; State Military Reservation, 15. Centers used by reserve Component Groups were: state military reservations, 820; USAR Centers, 3199; high schools, 814; ranges, 870.

It appears from comments listed that a number of users listed the actual location of TEC use rather than the type of facility from which the TEC lesson was obtained. Therefore, the results may provide any inaccurate representation of the extent of use of certain types of facilities. However, these comments do provide additional information regarding the final question to be discussed, location of TEC lesson use by groups.

Since it was not possible to determine from the indications of type and level of facility whether the lesson was used in the facility or checked out from the facility, TEC Group users were also asked where the lesson was used. It was assumed that individual users did not check out lessons/equipment so that all individual uses occurred in the facility.

Responses to the location of use question, presented in Table 23, indicate that most TEC uses (73.2%) occurred in the company/battery area for all types of activities. Regarding field use, modest percentages of use in Reserve Component Artillery (28.9%), Infantry (9.8%) and "Other" combat arms (13.6%) occurred in the field. These combat arms showed no field use among Active Component units or TRADOC activities. Among Active Component TEC groups only ADA (53.3%) and Armor (29.2%) recorded TEC use in the field. No other ADA field use was recorded, but Reserve Component Armor (7.4%) and Armor School users (18.4%) did show use of TEC in the field.

Table 22. TEC Uses by Type of Facility, Component and Combat Arm

(Page 1 of 2)

Type of Facility	Combat Arm					
	ADA	Armor	Artillery	Infantry	Other	Total
Individual						
Active Component						
Education Center		1	1			2
Learning Center	4	83	271	780		1138
Mobile Learning Center	64			4		68
MOS Library		35	47	28		110
NCO Academy				1		1
NG Armory						
Other	62	11		29	4	106
Reserve Component						
Education Center						
Learning Center	1	9	84	108		202
Mobile Learning Center				26		26
MOS Library			1	15		16
NCO Academy		1				1
NG Armory	74	201	957	661	3	1896
Other	15			3		18
Group						
Active Component						
Education Center		30				30
Learning Center	204	1803	7	5239	81	7334
Mobile Learning Center	453					453
MOS Library						
NCO Academy						
NG Armory						
ROTC Facility						
Other	90	2195	276	253		2814

Note: Uses missing, Individual: 311, Group: 3294.

Table 22. TEC Uses by Type of Facility, Component and Combat Arm

(Page 2 of 2)

Type of Facility	Combat Arm					
	ADA	Armor	Artillery	Infantry	Other	Total
Reserve Component						
Education Center				20		20
Learning Center		18	194	171		383
Mobile Learning Center		46		182		228
MOS Library				16		16
NCO Academy				76		76
NG Armory	1634	12653	7398	15289	920	37894
ROTC Facility	70	91				161
Other	105	40	8	6184		6337

Note: Uses missing, Individual: 311, Group: 3294.

Table 23. TEC Group Uses by Location of Use, Activity and Combat Arm

Type of Activity	Location of Use		
	Field	Company Area	Learning Center
Active Component			
ADA	390(53.3)[a]	342(46.7)	
Armor	1242(29.2)	2740(64.3)	278(6.5)
Artillery		276(97.5)	7(2.5)
Infantry		6225(88.9)	777(11.1)
Other			81(100.0)
Total	1632(13.2)	9583(77.5)	1143(9.2)
Reserve Component			
ADA		1700(95.8)	75(4.2)
Armor	925(7.4)	11404(91.6)	120(1.0)
Artillery	2205(28.9)	4692(61.4)	743(9.7)
Infantry	2185(9.8)	16451(73.4)	3774(16.8)
Other	120(13.6)	244(27.7)	516(58.6)
Total	5435(12.0)	34491(76.4)	5228(11.6)
TRADOC			
ADA School			861(100.0)
Armor School	65(18.4)		289(81.6)
Artillery School			
Infantry School		525(100.0)	
Other		3329(71.5)	1329(28.5)
Total	65(1.0)	3854(60.2)	2479(38.7)
Total	7153(11.0)	47586(73.2)	10257(15.8)

[a]Numbers in parentheses indicate percentages of total uses in the combat arm and type of activity represented by the corresponding number.

All groups of users shown in Table 23 used TEC in a Learning Center except Active Component ADA, Artillery School and Infantry School users. However, Learning Center use accounted for a substantial portion of total use only in FORSCOM "Other" combat arms (AC, 100.0%; RC, 58.6%) and among ADA School (100.0%), Armor School (81.6%) and "Other" TRADOC Activity (38.7%) use.

In summary, it appears that Active Component Individual TEC users were most likely to use Battalion Learning Centers. Some also took advantage of company/battery and brigade level facilities, MOS Libraries, etc.

Reserve Component individual users were most likely to go to a National Guard Armory. The fact that most uses appear to have occurred at battalion level might be due to the fact that lessons were ordered from battalion or that some battalion centers were co-located with companies/batteries or in close enough proximity to be visited on an individual basis.

TEC Group users, Active Component appeared most likely to check a lesson out from a battalion level or below learning center and use it in the company area. Reserve Component groups appeared to most often use TEC lessons at the company/battery armory.

RESULTS - PHASE 2

Of 85 battalions initially sampled during Phase 2, 66 (77.6%) returned questionnaires. A total of 3404 User Questionnaires (from 66 battalions) and 608 Unit Questionnaires (from 58 battalions) were returned. Battalion level interviews were completed in 42 (49.4%) of the battalions. A summary of data returns by combat arm and subsample may be found in Table 24.

Table 24. Summary of Phase 2 Returns by Combat Arm and Subsample

	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Battalions Returning	4(100.0)[a]	8(100.0)	7(100.0)	8(88.9)	27(96.4)
User Questionnaires	200(100.0)	482(100.0)	443(100.0)	417(88.9)	1542(96.4)
Unit Questionnaires	20(100.0)	95(87.5)	54(71.4)	85(88.9)	254(85.7)
Interviews	4(100.0)	5(62.5)	4(57.1)	5(55.6)	18(64.3)
USAREUR					
Battalions Returning	2(100.0)	4(100.0)	3(100.0)	4(100.0)	13(100.0)
User Questionnaires	104(100.0)	273(100.0)	143(100.0)	243(100.0)	763(100.0)
Unit Questionnaires	30(100.0)	66(100.0)	37(100.0)	68(100.0)	201(100.0)
Interviews	2(100.0)	3(75.0)	3(100.0)	4(100.0)	12(92.3)
CONUS-RC					
Battalions Returning	3(100.0)	4(44.4)	10(71.4)	9(50.0)	26(59.1)
User Questionnaires	148(100.0)	185(44.4)	395(71.4)	371(50.0)	1099(59.1)
Unit Questionnaires	14(100.0)	17(22.2)	75(64.3)	47(38.9)	153(44.7)
Interviews	0(0.0)	3(33.3)	5(35.7)	4(22.2)	12(27.3)
Total					
Battalions Returning	9(100.0)	16(76.2)	20(83.3)	21(67.7)	66(77.6)
User Questionnaires	452(100.0)	940(76.2)	981(83.3)	1031(67.7)	3404(77.6)
Unit Questionnaires	64(100.0)	178(62.0)	166(70.8)	200(61.3)	608(68.2)
Interviews	6(66.7)	11(52.4)	12(50.0)	13(41.9)	42(49.4)

[a] Numbers in parentheses indicate the percentages of total battalions initially sampled for which data is available.

SAMPLE CHARACTERISITCS

a. User Questionnaire. Of 3284 soldiers indicating whether they had used TEC (User Question 3a) or not, 1648 or 50.2% stated that they had. A breakdown of TEC use results by Combat Arm and subsample is shown in Table 25. It can be seen from the table that, among subsamples, USAREUR contained the highest percentage (56.0%) of users. Among Combat Arms, Infantry had the highest percentage (56.7%) of users, followed by Armor, (52.7%); Artillery, (47.3%); and ADA, (36.7%).

Chi-square analyses conducted separately for each subsample showed differences in relative user frequencies among combat arms to be statistically significant. Results of these analyses were: CONUS-AC, χ^2 = 25.16, df = 8, $p<.001$; USAREUR, χ^2 = 92.50, df = 6, $p<.001$; CONUS-RC, χ^2 = 12.92, df = 3, $p< .005$. It should be noted, however, that the rank order by combat arm of percentages of users is not identical for all subsamples.

Percentage of TEC users was remarkably low within the CONUS-RC, ADA group (14. 0%). This might be explained by the fact that these units often had only older equipment for which no TEC lessons have been developed. TEC training for newer types of equipment may be of limited value for them while the equipment itself is unavailable.

Based upon his response to Question 3a, each respondent to the TEC User Questionnaire was classified as a TEC User or Non-user. TEC Non-users were not asked to complete most of the remaining questions because they lacked the knowledge of experience necessary to do so. Therefore, unless otherwise stated, the following analyses of User Questionnaire data are based upon TEC User responses only.

TEC Users were asked to indicate the total number of TEC lessons they had ever used. The average number of lessons reported used per user is again shown in Table 25. The highest average number of lessons reported used (5.96) in a given subsample is again found in USAREUR. Among Combat Arms the highest average is in Armor (5.83) and the lowest is found in ADA (2.91). The average number of lessons used per user for the entire sample was 4.61.

It should be recalled that Individual TEC users in Phase 1 indicated that they used an average of 2.8 TEC lessons per month (Table 10). If this number were divided into the 4.61 average found in Phase 2, the resulting answer would be 1.65. In other words, rates of Individual TEC use found in Phases 1 and 2 would be similar only if Phase 2 users had been using TEC at the rate of 2.8 lessons per month for 1.65 months.

Since it is implausible that Phase 2 users have used TEC for only such a short time, it appears that the TEC use rate found in Phase 2 is lower than that found in Phase 1. As previously discussed in connection with the Phase 1 data, this may be due to sampling differences. The Phase 2 sample

Table 25. TEC Users in Sample by Subsample and Combat Arm

Combat Arm	Subsample			
	CONUS-AC	USAREUR-AC	CONUS-RC	Total
Air Defense Artillery				
Number of Users	88	51	19	158
Percentage of Users	45.8	50.0	14.0	36.7
Avg. Lessons Used	3.37[a]	5.23	.66	2.91
Armor				
Number of Users	239	148	88	475
Percentage of Users	51.5	55.6	51.1	52.7
Avg. Lessons Used	5.45	7.20	4.78	5.83
Artillery				
Number of Users	160	64	223	447
Percentage of Users	37.6	46.7	57.9	47.3
Avg. Lessons Used	3.62	3.06	5.10	4.11
Infantry				
Number of Users	202	156	210	568
Percentage of Users	50.4	64.2	58.8	56.7
Avg. Lessons Used	4.53	6.54	3 63	4.69
Total				
Number of Users	689	419	540	1648
Percent of Users	46.4	56.0	51.4	50.2
Avg. Lessons Used	4.41	5.96	3.91	4.61

[a] Numbers on these rows reflect percentages of total respondents (to Question 3a) in each subsample and combat arm represented by the reported numbers of TEC users. Total responses to question: 3284. Cases missing: 123.

covered a cross section of soldiers which included occasional and one-time-only TEC users while Phase 1 users were self-selected by having checked out at least one TEC lesson for Individual use during the sampling period.

Table 26 shows a breakdown of the User Questionnaire sample by type of company/battery. As would be expected, most respondents in all groups were from line companies. However, analyses by Chi-Square for each separate subsample showed frequency distributions of respondents among companies/batteries to differ significantly ($p<.001$) by combat arm (CONUS-AC, $\chi^2 = 298.68$, df = 32; USAREUR, $\chi^2 = 354.39$, df = 18; CONUS-RC, $\chi^2 = 511.67$, df = 18).

Also shown in Table 26 are the percentages of each group who had used TEC. (Again TEC User was defined as one who had positively indicated previous TEC use in Question 3a.) Overall, no one type of company/battery appeared to have a meaningfully higher percentage of users than any other.

TEC User Questionnaire respondents (users and non-users) are shown by MOS in Table 27. Large numbers of respondents are found in the 11 (B, C, D, E), 13 (A, B) and 16 (F, P, R) Series MOSs. Other MOSs having high frequencies of respondents are 31B, 36K, 76Y, 82C and 91B. Although percentages of respondents who had used TEC are also reported for each cell of Table 27, such percentages fluctuate widely and may be misleading in cells where numbers of respondents are very small. Although this is similar to concentrations of uses by MOS found in Phase 1, it may again simply reflect combat arm MOS concentrations.

A breakdown of User Questionnaire respondents (users and non-users) by pay grade (Table 28) showed most respondents to be in pay grades E2-E5. In Active Component Subsamples the highest concentrations of respondents were at the E4 level. In the CONUS-RC subsample, the highest concentration was at E5. These data show a similar pattern to that found in Phase 1 (Table 8) where most uses were shown at pay grades E-4, E-5, and E-6. Results of the Chi-square analyses done separately for each subsample showed distributions of respondents across pay grades to vary significantly by combat arm (CONUS-AC, $\chi^2 = 117.71$, df = 28, $p<.0001$; USAREUR, $\chi^2 = 43.47$, df = 21, $p<.003$; CONUS-RC, $\chi^2 = 47.03$, df = 24, $p<.004$).

Examination of Table 28 also reveals a systematic increase in percentages of TEC Users with increases in pay grade. This could be explained in several ways. Soldiers in more senior pay grades have had more time and opportunity for exposure to TEC. They are also more likely to be planning a career in the Army and hence, more motivated. There are more lessons appropriate for use by these individuals given that basic lessons are considered as appropriate as review training materials. Finally, soldiers in higher grades are more apt to serve as instructors, which could give them an additional reason for using TEC.

b. Unit Questionnaire. Most Unit Questionnaire respondents came from line companies/batteries. However, Chi-Square analyses for each subsample did show distributions of respondents across types of companies/batteries

Table 26. User Questionnaire Respondents by Type of Company/Battery, Combat Arm and Subsample

Company Battery	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Line Co/Btry	172 (43.6)[a]	351 (57.0)	333 (37.8)	281 (48.8)	1137 (47.3)
Hq Co/Btry	20 (40.0)	48 (25.0)	34 (61.8)	36 (50.0)	38 (42.8)
Support Co/Btry	1 (0.0)	68 (27.9)	44 (15.9)	91 (51.6)	204 (35.8)
Total	193 (43.0)	467 (49.5)	411 (37.5)	408 (49.5)	1479 (45.3)
USAREUR					
Line Co/Btry	96 (49.0)	198 (55.6)	88 (51.1)	190 (66.3)	572 (57.3)
Hq Co/Btry	6 (33.3)	29 (31.0)	25 (36.0)	29 (55.2)	89 (40.4)
Support Co/Btry	-	39 (69.2)	23 (34.8)	23 (56.5)	85 (56.5)
Total	102 (48.0)	266 (54.9)	136 (45.6)	242 (64.0)	746 (55.2)
CONUS-RC					
Line Co/Btry	145 (13.1)	160 (46.9)	248 (59.7)	263 (57.8)	816 (48.3)
Hq Co/Btry	-	-	60 (58.3)	51 (60.8)	111 (59.5)
Support Co/Btry	-	15 (66.7)	43 (62.8)	45 (51.1)	103 (58.3)
Total	145 (13.1)	175 (48.6)	351 (59.8)	359 (57.4)	1030 (50.5)
Total					
Line Co/Btry	413 (34.1)	709 (54.3)	669 (47.7)	734 (56.6)	2525 (49.9)
Hq Co/Btry	26 (38.5)	77 (27.3)	119 (54.6)	116 (56.0)	338 (47.6)
Support Co/Btry	1 (0.0)	122 (45.9)	110 (38.2)	159 (52.2)	392 (46.2)
Total	440 (34.3)	908 (50.9)	898 (47.4)	1009 (55.8)	3255 (49.2)

[a]Numbers in parentheses indicate the percentages of respondents in each cell indicating that they had used TEC. Total cases: 3255. Cases missing: 149

Table 27. User Questionnaire Respondents by MOS and Subsample

MOS	Subsample			
	CONUS-AC	USAREUR	CONUS-RC	Total
05B			1 (0.0)	1 (0.0)
05C	1 (0.0)[a]	1 (100.0)	2 (50.0)	4 (50.0)
05E	3 (33.3)			3 (33.3)
05F	4 (0.0)	1 (0.0)		5 (0.0)
05Y	1 (100.0)			1 (100.0)
11B	391 (50.9)	170 (65.9)	212 (55.2)	773 (55.4)
11C	96 (53.1)	53 (77.4)	66 (63.6)	215 (62.3)
11D	67 (35.8)	19 (63.2)	25 (68.0)	111 (47.7)
11E	253 (57.3)	169 (61.5)	113 (47.8)	535 (56.6)
11P		1 (100.0)	1 (100.0)	2 (100.0)
12B			1 (100.0)	1 (100.0)
12D			1 (100.0)	1 (100.0)
13A			27 (51.9)	27 (51.9)
13B	302 (32.1)	90 (50.0)	141 (57.4)	33 (41.8)
13E	58 (63.8)	4 (75.0)	42 (83.3)	04 (72.1)
13F				2 (50.0)
13M	1 (0.0)		2 (50.0)	1 (0.0)
13W			1 (100.0)	1 (100.0)
13Y	2 (100.0)		2 (100.0)	4 (100.0)
15Z			1 (100.0)	1 (100.0)

[a]Numbers in parentheses indicate the numbers of respondents in each cell indicating that they had used TEC.

Table 27. *User Questionnaire* Respondents by MOS and Subsample

(Page 2 of 4)

MOS	Subsample			
	CONUS-AC	USAREUR	CONUS-RC	Total
16B			1 (0.0)	1 (0.0)
16C		2 (0.0)	1 (0.0)	3 (0.0)
16D	5 (40.0)			5 (40.0)
16E	2 (50.0)		2 (0.0)	4 (25.0)
16F			123 (12.2)	123 (12.2)
16J	7 (71.4)	5 (40.0)		12 (58.3)
16P	79 (35.4)	67 (49.3)	7 (42.9)	153 (41.8)
16R	77 (53.2)	24 (79.2)		101 (59.4)
17B	1 (0.0)			1 (0.0)
17K	3 (0.0)	7 (42.9)	2 (100.0)	12 (41.7)
24M	2 (50.0)			2 (50.0)
24N		3 (33.3)		3 (33.3)
26B		1 (100.0)		1 (100.0)
26C			1 (0.0)	1 (0.0)
27D	1 (100.0)			1 (100.0)
31B	7 (14.3)	3 (33.3)	15 (53.3)	25 (40.0)
31G	6 (33.3)	2 (50.0)	8 (62.5)	16 (50.0)
31M	2 (100.0)		1 (100.0)	3 (100.0)
35B			1 (0.0)	1 (0.0)
36B		1 (0.0)		1 (0.0)

[a]Numbers in parentheses indicate the numbers of respondents in each cell indicating that they had used TEC.

Table 27. User Questionnaire Respondents by MOS and Subsample

(Page 3 of 4)

MOS	Subsample			
	CONUS-AC	USAREUR	CONUS-RC	Total
36C	1 (0.0)		4 (0.0)	5 (0.0)
36G			1 (0.0)	1 (0.0)
36K	37 (40.5)	14 (14.3)	39 (74.4)	90 (51.1)
36R	1 (0.0)			1 (0.0)
45N	1 (0.0)	6 (33.3)		7 (28.6)
45P	3 (33.3)		1 (0.0)	4 (25.0)
45R		1 (0.0)		1 (0.0)
46C			1 (0.0)	1 (0.0)
51A	2 (0.0)			2 (0.0)
52B	7 (14.3)	6 (16.7)	2 (50.0)	15 (20.0)
53B			1 (0.0)	1 (0.0)
54C			1 (0.0)	1 (0.0)
57H			2 (0.0)	2 (0.0)
62C		1 (0.0)		1 (0.0)
63B	12 (41.7)	9 (33.3)	16 (37.5)	7 (37.8)
63C	10 (40.0)	31 (22.6)	33 (39.4)	74 (32.4)
63F	4 (50.0)	12 (16.7)	2 (0.0)	18 (22.2)
63H	1 (0.0)	3 (33.3)	2 (0.0)	6 (16.7)
63N			1 (100.0)	1 (100.0)
64B			1 (100.0)	1 (100.0)

[a]Numbers in parentheses indicate the numbers of respondents in each cell indicating that they had used TEC.

Table 27. User Questionnaire Respondents by MOS and Subsample

(Page 4 of 4)

MOS	Subsample			
	CONUS-AC	USAREUR	CONUS-RC	Total
64C	11 (9.1)	4 (0.0)	12 (66.7)	27 (33.3)
67N	1 (0.0)		2 (100.0)	3 (66.7)
68G			1 (100.0)	1 (100.0)
70H			1 (0.0)	1 (0.0)
71A	1 (0.0)		1 (100.0)	2 (50.0)
71B	1 (100.0)		3 (66.7)	4 (75.0)
71L		1 (100.0)		1 (100.0)
71T			1 (0.0)	1 (0.0)
72C			1 (0.0)	1 (0.0)
72E	1 (100.0)			1 (100.0)
73C			2 (0.0)	2 (0.0)
74D			1 (0.0)	1 (0.0)
75B	3 (0.0)	1 (0.0)	14 (28.6)	18 (22.2)
75C	1 (100.0)		1 (100.0)	2 (100.0)
75D			1 (0.0)	1 (0.0)
75H			1 (100.0)	1 (100.0)
75Z	1 (100.0)		3 (66.7)	4 (75.0)
76D	9 (11.1)	9 (11.1)	3 (50.0)	20 (15.0)
76P		1 (100.0)	2 (0.0)	3 (33.3)

[a]Numbers in parentheses indicate the numbers of respondents in each cell indicating that they had used TEC.

Table 28. User Questionnaire Respondents by Pay Grade, Combat Arm and Subsample

(Page 1 of 3)

Pay Grade	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
E1	7 (28.6)[a]	16 (6.3)	21 (14.3)	13 (7.7)	57 (12.3)
E2	45 (37.8)	69 (21.7)	81 (33.3)	32 (9.4)	227 (27.3)
E3	56 (44.6)	66 (42.4)	88 (28.4)	91 (37.4)	301 (37.2)
E4	59 (49.2)	186 (51.6)	182 (43.4)	139 (41.0)	566 (46.1)
E5	19 (57.9)	85 (76.5)	39 (43.6)	85 (76.5)	228 (69.3)
E6	6 (33.3)	38 (65.8)	12 (50.0)	31 (83.9)	87 (67.8)
E7	-	7 (57.1)	-	13 (92.3)	20 (80.0)
E8	-	-	2 (100.0)	2 (100.0)	4 (100.0)
E9	-	-	-	-	-
Total	192 (44.8)	476 (50.0)	425 (37.4)	406 (49.3)	1490 (45.6)
USAREUR					
E1	1 (00.0)	16 (6.3)	8 (3.8)	7 (57.1)	32 (25.0)
E2	9 (11.1)	46 (28.3)	15 (53.3)	53 (50.9)	123 (39.8)
E3	32 (46.9)	43 (39.5)	36 (16.7)	65 (58.5)	176 (43.2)
E4	37 (43.2)	90 (60.0)	56 (48.2)	69 (62.3)	252 (55.6)
E5	15 (60.0)	42 (88.1)	13 (69.2)	34 (88.2)	104 (81.7)
E6	8 (100.0)	23 (73.9)	9 (77.8)	8 (100.0)	48 (83.3)
E7	1 (100.0)	3 (100.0)	3 (100.0)	1 (100.0)	8 (100.0)
E8	-	1 (100.0)	-	1 (100.0)	2 (100.0)

[a] Numbers in parentheses indicate the numbers of respondents in each cell indicating that they had used TEC.

Table 28. User Questionnaire Respondents by Pay Grade, Combat Arm and Subsample

Pay Grade	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
USAREUR (Cont'd)					
E9	-	-	-	-	-
Total	103 (48.5)	264 (54.2)	140 (45.0)	238 (63.9)	745 (54.8)
CONUS-RC					
E1	2 (0.0)	-	2 (50.0)	4 (25.0)	8 (25.0)
E2	2 (0.0)	14 (2.14)	11 (36.4)	27 (33.3)	54 (29.6)
E3	16 (0.0)	29 (40.3)	51 (33.3)	48 (52.1)	144 (37.5)
E4	39 (5.1)	49 (36.7)	97 (50.5)	90 (53.3)	275 (42.5)
E5	54 (24.1)	52 (63.5)	99 (64.6)	103 (62.1)	308 (56.5)
E6	11 (18.2)	21 (71.4)	81 (77.8)	64 (64.1)	177 (68.4)
E7	3 (33.3)	6 (66.7)	22 (90.9)	23 (69.6)	54 (75.9)
E8	-	1 (100.0)	3 (100.0)	3 (66.7)	7 (85.7)
E9	-	-	-	1 (100.0)	1 (100.0)
Total	127 (14.2)	172 (50.0)	366 (60.4)	363 (57.0)	1028 (51.8)
Total					
E1	10 (20.0)	32 (6.3)	31 (22.6)	24 (25.0)	97 (17.5)
E2	56 (32.1)	129 (24.0)	107 (36.4)	112 (34.8)	404 (31.4)
E3	104 (38.5)	138 (41.3)	175 (27.4)	204 (47.5)	621 (43.8)
E4	135 (34.8)	325 (51.7)	335 (46.3)	298 (49.7)	1093 (47.4)

[a]Numbers in parentheses indicate the numbers of respondents in each cell indicating that they had used TEC.

Table 28. User Questionnaire Respondents by Pay Grade, Combat Arm and Subsample

Pay Grade	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
Total (Cont'd)					
E5	88 (37.5)	179 (75.4)	151 (59.6)	222 (71.6)	640 (65.2)
E6	25 (48.0)	82 (69.5)	102 (74.5)	103 (72.8)	312 (70.5)
E7	4 (50.0)	16 (68.8)	25 (92.0)	37 (78.4)	82 (79.3)
E8	-	2 (50.0)	5 (100.0)	6 (83.3)	13 (92.3)
E9	-	-	-	1 (100.0)	1 (100.0)
Total	422 (36.5)	903 (51.3)	931 (47.6)	1007 (55.5)	3263 (49.6)

[a]Numbers in parentheses indicate the numbers of respondents in each cell indicating that they had used TEC.

to vary significantly ($p<.0001$) by combat arm (CONUS-AC, $\chi^2 = 83.50$, df = 24; USAREUR, $\chi^2 = 112.55$, df = 21; CONUS-RC, $\chi^2 = 123.71$, df = 28). The distribution of respondents across combat arm, subsample and type of company/battery is shown in Table 29.

Unit Trainers listed a total of 88 different current positions within the unit. Since most position titles were listed by so few respondents, these were grouped according to type and level of supervision. The frequency of response at each category is listed in Table 30. As shown, most Unit Questionnaire respondents (41.7%) fell into the "Tactical Leader/Commander (EM) " Category. Single positions most often listed were Squad Leader (13.1%) and Platoon Sergeant (12.8%)

Pay Grades of Unit Trainers (Table 31) were concentrated in the higher enlisted grades (E5-E7) with 48-80% of trainees shown in each group of Table 31 falling within these grades. Distribution of Unit Trainer pay grades differed significantly among Combat Arms only in the CONUS-AC subsample ($\chi^2 = 314.14$, df = 60, $p<.0001$).

The length of time Unit Trainers had spent working with TEC materials may be seen in Table 32. Over 40% of the CONUS-AC Subsample and over 50% of the USAREUR and CONUS-RC Subsamples had worked with TEC for longer than 12 months. Chi-Square analyses (for ungrouped data) showed the distributions of respondents over months worked with TEC to differ among combat arms only within the CONUS-RC subsample ($\chi^2 = 167.89$, df = 104, $p < .0001$).

It should be noted that several respondents indicated that they had worked with TEC longer than the program has been in existence. These individuals may have misunderstood the question and responded in terms of length of military service or years of experience with training. These respondents are grouped into the "49 months or longer" category of Table 32.

c. Battalion Interview. Current positions of Battalion Interviewees were as follows: 10 were S - 3's, 8 were Assistant S - 3's, 9 were Operations Sergeants and 3 were Assistant Operations Sergeants. Respondents listing other position titles included: Training/Liaison Officer, 2; Battalion Training/Education NCO, 3; Staff Training Assistant, 2; Battalion Learning Center NCO, 2; and Operations, Training and Readiness Specialist, 3. The latter position was listed by those who were both civilian employees and members of National Guard battalions.

Pay grades of respondents ranged from O4 to E4. Twenty (20) were officers and 21 were NCOs (1 response missing). The modal pay grade for officers was O3 (9) and for NCOs was E8 (8).

Of those 33 respondents asked to give the total time they had worked with TEC materials, over half (18) indicated a period of two and one-half years or longer. The most frequent response was 30 months (12). Only one respondent indicated a time (3 months) of less than 6 months. Nine

Table 29. Unit Questionnaire Respondents by Type of Company/Battery Combat Arm and Subsample

Company/Battery	Combat Arm				
	ADA	Artillery	Armor	Infantry	Total
CONUS-AC					
Line Co/Btry	10 (62.5)[a]	67 (73.6)	42 (79.2)	64 (76.2)	18B (75.0)
Hq Co/Btry	6 (37.5)	16 (17.6)	4 (7.5)	9 (10.7)	35 (14.3)
Support Co/Btry	0 (0.0)	8 (8.8)	7 (13.2)	11 (13.1)	26 (10.7)
Total	16 (100.0)	91 (100.0)	53 (100.0)	84 (100.0)	244 (100.0)
USAREUR-AC					
Line Co/Btry	26 (92.9)	47 (69.1)	16 (44.4)	52 (80.0)	141 (71.6)
Hq Co/Btry	2 (7.1)	11 (16.2)	14 (38.9)	4 (6.2)	31 (15.7)
Support Co/Btry	0 (0.0)	10 (14.7)	6 (16.7)	9 (13.8)	25 (12.7)
Total	28 (100.0)	68 (100.0)	36 (100.0)	65 (100.0)	197 (100.0)
CONUS-RC					
Line Co/Btry	13 (100.0)	4 (23.5)	53 (79.1)	24 (55.8)	94 (67.1)
Hq Co/Btry	0 (0.0)	5 (29.4)	7 (10.4)	13 (30.2)	25 (17.9)
Support Co/Btry	0 (0.0)	8 (47.1)	7 (10.4)	6 (14.0)	21 (15.0)
Total	13 (100.0)	17 (100.0)	67 (100.0)	43 (100.0)	140 (100.0)
TOTAL					
Line Co/Btry	49 (86.0)	118 (67.0)	111 (71.2)	140 (72.9)	418 (72.0)
Hq Co/Btry	8 (14.0)	32 (18.2)	25 (16.0)	26 (13.5)	91 (15.7)
Support Co/Btry	0 (0.0)	26 (14.8)	20 (12.8)	26 (13.5)	72 (12.4)
Total	57 (100.0)	176 (100.0)	156 (100.0)	192 (100.0)	581 (100.0)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 27.

Table 30. Unit Questionnaire Respondents by Current Position and Subsample

(Page 1 of 2)

Current Position	Combat Arm			
	CONUS-AC	USAREUR	CONUS-RC	Total
Tactical Ldr/Cmdr (Off)				
Co/Btry Cmdr	15(6.3)[a]	9(4.5)	16(11.2)	40(6.9)
Plt Leader	8(3.3)	18(9.1)	10(7.0)	36(6.2)
Other	4(1.7)	2(1.0)	4(2.8)	10(1.7)
Tactical Ldr/Cmdr (EM)				
Plt SGT	27(11.3)	35(17.7)	12(8.4)	74(12.8)
Squad Leader	40(16.7)	31(15.7)	5(3.5)	76(13.1)
Tank Cmdr	13(5.4)	12(6.1)		25(4.3)
Team Ldr	15(6.3)	4(2.0)	1(.7)	20(3.4)
Other	30(12.6)	11(5.6)	6(4.2)	47(8.1)
Admin Supervisor (Off)	7(2.9)	5(2.5)	13(9.1)	25(4.3)
Admin Supervisor (EM)				
First SGT	4(1.7)	10(5.0)	11(7.7)	25(4.3)
Other	8(3.3)	2(1.0)	7(4.9)	17(2.9)
Opns & Tng Staff (Off)	3(1.3)	5(2.5)	8(5.6)	16(2.8)
Opns & Tng Staff (EM)				
Opns & Asst Opns SGT	9(3.8)	4(2.0)	3(2.1)	16(2.8)
Other	5(2.1)	4(2.0)	11(7.7)	20(3.4)
Combat Spt Elem Supervisor (Off)	2(.8)		3(2.1)	5(.9)
Combat Spt Elem Supervisor (EM)				
Section Chief	8(3.8)	7(3.5)	7(4.9)	23(4.0)
Other	7(2.9)	6(3.0)	14(9.8)	27(4.6)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 29.

Table 30. Unit Questionnaire Respondents by Current Position and Subsample

(Page 2 of 2)

Current Position	Combat Arm			
	CONUS-AC	USAREUR	CONUS-RC	Total
Tactical Crew/Team Member				
Tank Crew	16(6.7)	18(9.1)	1(.7)	35(6.0)
Other	9(3.8)	8(4.0)	6(4.2)	23(4.0)
Staff & CS Crew/Team Member	8(3.3)	7(3.5)	5(3.5)	20(3.4)
Total	239(100.0)	187(100.0)	143(100.0)	580(100.0)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 28.

Table 31. Unit Questionnaire Respondents by Pay Grade, Combat Arm and Subsample

(Page 1 of 4)

Pay Grade	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
E1	-	1 (1.1)[a]	-	-	1 (.4)
E2	-	3 (3.2)	1 (1.9)	1 (1.2)	5 (2.0)
E3	1 (5.9)	5 (5.3)	1 (1.9)	1 (1.2)	8 (3.2)
E4	3 (17.6)	18 (18.9)	3 (5.8)	7 (8.4)	31 (12.6)
E5	1 (5.9)	21 (22.1)	7 (13.5)	21 (25.3)	50 (20.2)
E6	7 (41.2)	26 (27.4)	18 (34.6)	28 (33.7)	79 (32.0)
E7	1 (5.9)	9 (9.5)	10 (19.2)	8 (9.6)	28 (11.3)
E8	1 (5.9)	1 (1.1)	1 (1.9)	1 (1.2)	4 (1.6)
E9	-	1 (1.1)	-	1 (1.2)	2 (.8)
01	2 (11.8)	3 (3.2)	4 (7.7)	4 (4.8)	13 (5.3)
02	1 (5.9)	1 (1.1)	3 (5.8)	3 (3.6)	8 (3.2)
03	-	6 (6.3)	4 (7.7)	8 (9.6)	18 (7.3)
04	-	-	-	-	-
Total	17	95	52	83	247
USAREUR					
E1	-	1 (1.5)	2 (5.4)	1 (1.5)	4 (2.0)
E2	-	-	1 (2.7)	1 (1.5)	2 (1.0)
E3	3 (10.0)	1 (1.5)	2 (5.4)	1 (1.5)	7 (3.5)
E4	-	5 (7.4)	4 (10.8)	5 (7.6)	14 (7.0)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 9.

Table 31. Unit Questionnaire Respondents by Pay Grade, Combat Arm and Subsample
(Page 2 of 4)

Pay Grade	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
USAREUR (Cont'd)					
E5	3 (10.0)	18 (26.5)	6 (16.2)	13 (19.7)	40 (19.9)
E6	12 (40.0)	17 (25.0)	7 (18.9)	25 (37.9)	61 (30.3)
E7	6 (20.0)	6 (8.8)	5 (13.5)	8 (12.1)	25 (12.4)
E8	2 (6.7)	4 (5.9)	2 (5.4)	3 (4.5)	11 (5.5)
E9	-	-	-	-	-
01	2 (6.7)	7 (10.3)	3 (8.1)	5 (7.6)	17 (8.5)
02	2 (6.7)	4 (5.9)	3 (8.1)	-	9 (4.5)
03	-	5 (7.4)	2 (5.4)	4 (6.1)	11 (5.5)
04	-	-	-	-	-
Total	30	68	37	66	201
CONUS-RC					
E1	-	-	-	-	-
E2	-	-	-	-	-
E3	-	-	-	1 (2.1)	1 (.7)
E4	2 (14.3)	1 (5.9)	5 (6.8)	1 (2.1)	9 (6.0)
E5	1 (7.1)	5 (29.4)	17 (23.0)	5 (10.9)	28 (18.5)
E6	5 (35.7)	3 (17.6)	12 (16.2)	7 (15.2)	27 (17.9)
E7	1 (7.1)	1 (5.9)	7 (9.5)	11 (23.9)	20 (13.2)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 9.

Table 31. Unit Questionnaire Respondents by Pay Grade, Combat Arm and Subsample

Pay Grade	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-RC (Cont'd)					
E8	2 (14.3)	1 (5.9)	5 (6.8)	4 (8.7)	12 (7.9)
E9	-	1 (5.9)	-	-	1 (.7)
01	2 (14.3)	3 (17.6)	7 (9.5)	6 (13.0)	18 (11.9)
02	-	1 (5.9)	10 (13.5)	7 (15.2)	18 (11.9)
03	1 (7.1)	1 (5.9)	9 (12.2)	3 (6.5)	14 (9.3)
04	-	-	2 (2.7)	1 (2.2)	3 (1.9)
Total	14	17	74	46	151
Total					
E1	-	2 (1.1)	2 (1.2)	1 (.5)	5 (.8)
E2	-	3 (1.7)	2 (1.2)	2 (1.0)	7 (1.2)
E3	4 (6.6)	6 (3.3)	3 (1.8)	3 (1.5)	16 (2.6)
E4	5 (8.2)	24 (13.3)	12 (7.3)	13 (6.6)	54 (8.9)
E5	5 (8.2)	44 (24.4)	30 (18.2)	39 (19.7)	118 (19.4)
E6	24 (39.3)	46 (25.6)	37 (22.4)	60 (30.3)	167 (27.5)
E7	8 (13.1)	16 (8.9)	22 (13.3)	27 (13.6)	73 (12.0)
E8	5 (8.2)	6 (3.3)	8 (4.8)	8 (4.0)	27 (4.6)
E9	-	2 (1.1)	-	1 (.5)	3 (.5)
01	6 (9.8)	13 (7.2)	14 (8.5)	15 (7.6)	48 (7.9)
02	3 (4.9)	6 (3.3)	16 (9.7)	10 (5.1)	35 (5.8)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 9.

Table Unit Questionnaire Respondents by Pay Grade, Combat Arm and Subsample

Pay Grade	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
Total (Cont'd)					
03	1 (1.6)	12 (6.7)	15 (9.1)	15 (7.6)	43 (7.1)
04	-	-	2 (1.2)	1 (.5)	3 (.5)
Total	61	180	163	195	599

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 9.

Table 32. Unit Trainers' Time Worked with TEC by Combat Arm and Subsample

Subsample	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
6 months or less	9(50.0)[a]	24(29.3)	12(26.1)	22(31.4)	67(31.0)
7 - 12 months	3(16.7)	18(22.0)	11(23.9)	16(22.9)	48(22.2)
13 - 24 months	3(16.7)	19(23.2)	11(23.9)	18(25.7)	51(23.6)
25 - 48 months	2(11.1)	14(17.1)	9(19.6)	12(17.1)	37(17.1)
49 months or longer	1(5.6)	7(8.5)	3(6.5)	2(2.9)	13(6.0)
USAREUR					
6 months or less	5(17.9)	3(5.0)	12(38.7)	11(17.2)	31(16.9)
7 - 12 months	4(14.3)	14(23.3)	6(19.4)	17(26.6)	41(22.4)
13 - 24 months	11(39.3)	23(38.3)	9(29.0)	23(35.9)	66(36.1)
25 - 48 months	7(25.0)	18(30.0)	2(6.5)	9(14.1)	36(19.7)
49 months or longer	1(3.6)	2(3.3)	2(6.5)	4(6.3)	9(4.9)
CONUS-RC					
6 months or less	4(40.0)	5(29.4)	9(15.0)	4(9.1)	22(16.8)
7 - 12 months	2(20.0)	3(17.6)	12(20.0)	9(20.5)	26(19.8)
13 - 24 months	3(30.0)	5(29.4)	27(45.0)	23(52.3)	58(44.3)
25 - 48 months	1(10.0)	3(17.6)	10(16.7)	8(18.2)	22(16.8)
49 months or longer	0(0.0)	1(5.9)	2(3.3)	0(0.0)	3(2.3)
Total					
6 months or less	18(32.1)	32(20.1)	33(24.1)	37(20.8)	120(22.6)
7 - 12 months	9(16.1)	35(22.0)	29(21.2)	42(23.6)	115(21.7)
13 - 24 months	17(30.4)	47(29.6)	47(34.3)	64(36.0)	175(33.0)
25 - 48 months	10(17.9)	35(22.0)	21(15.3)	29(16.3)	95(17.9)
49 months or longer	2(3.6)	10(6.3)	7(5.1)	6(3.4)	25(4.7)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Total cases: 530. Cases missing: 78.

respondents to an early version of the interview were asked how long they had worked with TEC while in their current positions. Their answers were 1 (2), 4, 6 (2), 9, 11, 20 and 30 months.

OPINIONS ABOUT TEC

All respondents to the TEC User Questionnaire (both Users and Non-users) were asked what, in their opinions, other soldiers thought about the TEC program. Frequencies of respondents giving each answer to this question are given by combat arm and subsample in Table 33.

A large number of respondents (46.7%) indicated that they did not know what other soldiers thought about TEC. Most respondents who did have opinions either thought that most others felt TEC to be a good program (26.3%) or that others were evenly divided in feelings about TEC (19.2%). Very few respondents (7.9%) indicated that they felt most others thought TEC to be a waste. Although exact distributions of responses differed significantly within each subsample (CONUS-AC, $\chi^2 = 51.08$, df = 16, $p < .0001$; USAREUR, $\chi^2 = 27.54$, df = 12, $p < .007$; CONUS-RC, $\chi^2 = 108.53$, df = 12, $p < .0001$), the general pattern of responses discussed above remained the same.

Unit and User Questionnaire respondents and Battalion Interviewees were asked whether they felt that the TEC program should be continued or not. Responses from the User Questionnaire are summarized in Table 34. Most soldiers (65.2%) felt that TEC should be continued. Many (37.3%) also felt that TEC is a good program. Most other respondents (30.0%) felt that they did not know enough to indicate a definite opinion. Very few (4.8%) felt that TEC should not be continued.

Chi-square analyses of response distribution across combat arms within each subsample showed these to differ significantly only within CONUS-subsamples (AC, $\chi^2 = 34.50$, df = 20, $p < .03$; RC, $\chi^2 = 153.25$, df = 15, $p < .0001$). Upon examination of Table 34, the CONUS-RC difference appears to be due to the fact that 72.5% of the ADA group did not know if TEC should be continued. This agrees with and might be explained by their low usage rate as shown in Table 2. The explanation for the CONUS-AC difference is not immediately obvious.

The summarized responses from Unit Trainers who were asked the same question are shown in Table 35. Here 87.7% of all respondents felt that TEC should be continued and 61.7% felt that it should be continued because it is a good program. Few respondents (9.8%) felt that they did not know and only 2.5% thought TEC was not worth continuing.

Table 33. User Questionnaire Respondents' Opinions on Others' Attitudes toward TEC by Combat Arm and Subsample

Opinions	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Most think it's good	32(17.0)[a]	77(17.8)	54(15.0)	115(28.8)	278(29.2)
Half like it - half don't	28(14.9)	105(24.2)	72(20.1)	56(14.0)	261(18.9)
Most think it's a waste	13(6.9)	38(8.8)	37(10.3)	30(7.5)	118(8.6)
I don't know	115(61.2)	213(49.2)	196(54.6)	198(49.6)	722(52.4)
Total	188(100.0)	433(100.0)	359(100.0)	399(100.0)	1379(100.0)
USAREUR					
Most think it's good	20(19.2)	62(23.4)	22(16.3)	65(26.9)	169(22.7)
Half like it - half don't	25(24.0)	55(20.8)	18(13.3)	53(21.9)	151(20.2)
Most think it's a waste	10(9.6)	35(13.2)	11(8.1)	21(8.7)	77(10.3)
I don't know	49(47.1)	113(42.6)	84(62.2)	103(42.6)	349(46.8)
Total	104(100.0)	265(100.0)	135(100.0)	242(100.0)	746(100.0)
CONUS-RC					
Most think it's good	16(12.4)	43(33.6)	152(45.8)	147(42.0)	358(38.1)
Half like it - half don't	14(10.9)	32(25.0)	65(19.6)	64(18.3)	175(18.6)
Most think it's a waste	1(.8)	7(5.5)	12(3.6)	26(7.4)	46(4.9)
I don't know	98(76.0)	46(35.9)	103(31.0)	113(32.3)	360(38.3)
Total	129(100.0)	128(100.0)	332(100.0)	350(100.0)	939(100.0)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 340.

Table 33. User Questionnaire Respondents' Opinions on Others' Attitudes toward TEC by Combat Arm and Subsample

Opinions	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
Total					
Most think it's good	68(16.2)	182(22.0)	228(27.6)	327(33.0)	805(26.3)
Half like it - half don't	67(15.9)	192(23.2)	155(18.8)	173(17.5)	587(19.2)
Most think it's a waste	24(5.7)	80(9.7)	60(7.3)	77(7.8)	241(7.9)
I don't know	262(62.2)	372(45.0)	383(46.4)	414(41.8)	1431(46.7)
Total	421(100.0)	826(100.0)	826(100.0)	991(100.0)	3064(100.0)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 340.

Table 34. User Questionnaire Respondents' Opinions on TEC Continuance by Combat Arm and Subsample

Opinions on Continuing TEC	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Yes	107(57.5)[a]	276(63.6)	216(60.0)	250(63.0)	849(61.7)
Good program	53(28.5)	144(33.2)	119(33.1)	168(42.4)	484(35.2)
Does some good	54(29.0)	132(30.4)	97(26.9)	82(20.6)	365(26.5)
No	10(5.4)	29(6.7)	22(6.1)	19(4.8)	80(5.9)
Not enough good	5(2.7)	19(4.4)	8(2.2)	6(1.5)	38(2.8)
Waste of time	5(2.7)	10(2.3)	14(3.9)	13(3.3)	42(3.1)
Don't know	69(37.1)	129(29.7)	121(33.6)	127(32.1)	446(32.4)
Total	186(100.0)	434(100.0)	359(100.0)	396(100.0)	1375(100.0)
USAREUR					
Yes	64(62.2)	182(69.2)	83(61.5)	179(74.2)	508(68.4)
Good program	28(27.2)	95(36.1)	52(38.5)	90(37.3)	265(35.7)
Does some good	36(35.0)	87(33.1)	31(23.0)	89(36.9)	243(32.7)
No	5(4.8)	17(6.5)	6(4.5)	8(3.4)	36(4.8)
Not good enough	2(1.9)	10(3.8)	2(1.5)	4(1.7)	18(2.4)
Waste of time	3(2.9)	7(2.7)	4(3.0)	4(1.7)	18(2.4)
Don't know	34(33.0)	64(24.3)	46(34.1)	54(22.4)	198(26.7)
Total	103(100.0)	263(100.0)	135(100.0)	241(100.0)	742(100.0)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 350.

Table 34. User Questionnaire Respondents' Opinions on TEC Continuance by Combat Arm and Subsample

Opinions on Continuing TEC	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-RC					
Yes	34(26.0)	92(69.7)	241(73.1)	269(78.2)	636(67.8)
Good program	19(14.5)	53(40.2)	158(47.9)	161(46.8)	391(41.7)
Does some good	15(11.5)	39(29.5)	83(25.2)	108(31.4)	245(26.1)
No	2(1.6)	4(3.1)	11(3.3)	12(3.4)	29(3.2)
Not enough good	1(.8)	3(2.3)	9(2.7)	6(1.7)	19(2.0)
Waste of time	1(.8)	1(.8)	2(.6)	6(1.7)	10(1.2)
Don't know	95(72.5)	36(27.3)	78(23.6)	63(18.3)	272(29.0)
Total	131(100.0)	132(100.0)	330(.00.0)	344(100.0)	937(100.0)
Total					
Yes	205(48.8)	550(66.3)	540(65.5)	698(71.1)	1993(65.2)
Good program	100(23.8)	292(35.2)	329(39.9)	419(42.7)	1140(37.3)
Does some good	105(25.0)	258(31.1)	211(25.6)	279(28.4)	853(27.9)
No	17(4.0)	50(6.1)	39(4.7)	39(3.9)	145(4.8)
Not enough good	8(1.9)	32(3.9)	19(2.3)	16(1.6)	75(2.5)
Waste of time	9(2.1)	18(2.2)	20(2.4)	23(2.3)	70(2.3)
Don't know	198(47.1)	229(27.6)	245(29.7)	244(24.9)	916(30.0)
Total	420(100.0)	829(100.0)	824(100.0)	981(100.0)	3054(100.0)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 350.

Table 35. Unit Questionnaire Respondents' Opinions on TEC Continuance by Combat Arm and Subsample

Opinions on Continuing TEC	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Yes	17(94.4)[a]	78(82.9)	45(91.8)	73(90.1)	213(87.9)
Good program	15(83.3)	51(54.2)	32(65.3)	56(69.1)	154(63.6)
Does some good	2(11.1)	27(28.7)	13(26.5)	17(21.0)	59(24.3)
No	0(0.0)	2(2.1)	1(2.0)	2(2.5)	5(2.1)
Not enough good	0(0.0)	2(2.1)	0(0.0)	2(2.5)	4(1.7)
Waste of time	0(0.0)	0(0.0)	1(2.0)	0(0.0)	1(.4)
Don't know	1(5.6)	14(14.9)	3(6.1)	6(7.4)	24(9.9)
Total	18(100.0)	94(100.0)	49(100.0)	81(100.0)	242(100.0)
USAREUR					
Yes	29(96.7)	57(83.8)	27(75.0)	60(90.9)	173(86.5)
Good program	21(70.0)	38(55.9)	17(47.2)	48(72.7)	124(62.0)
Does some good	8(26.7)	19(27.9)	10(27.8)	12(18.2)	49(24.5)
No	1(3.3)	7(10.3)	0(0.0)	1(1.5)	9(4.5)
Not enough good	0(0.0)	3(4.4)	0(0.0)	1(1.5)	4(2.0)
Waste of time	1(3.3)	4(5.9)	0(0.0)	0(0.0)	5(2.5)
Don't know	0(0.0)	4(5.9)	9(25.0)	5(7.6)	18(9.0)
Total	30(100.0)	68(100.0)	36(100.0)	66(100.0)	200(100.0)
CONUS-RC					
Yes	12(92.3)	17(100.0)	60(81.1)	45(95.7)	134(88.8)
Good program	8(61.5)	9(52.9)	41(55.4)	30(63.8)	88(58.3)
Does some good	4(30.8)	8(47.1)	19(25.7)	15(31.9)	46(30.5)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 15.

Table 35. Unit Questionnaire Respondents' Opinions on TEC Continuance by Combat Arm and Subsample

Opinions on Continuing TEC	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
No	0(0.0)	0(0.0)	1(1.4)	0(0.0)	1(.7)
Not enough good	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Waste of time	0(0.0)	0(0.0)	1(1.4)	0(0.0)	1(.7)
Don't know	1(7.7)	0(0.0)	13(17.6)	2(4.3)	16(10.6)
Total	13(100.0)	17(100.0)	74(100.0)	47(100.0)	151(100.0)
Total					
Yes	58(95.1)	152(84.9)	132(83.0)	178(91.8)	520(87.7)
Good program	44(72.1)	98(54.7)	90(56.6)	134(69.1)	366(61.7)
Does some good	14(23.0)	54(30.2)	42(26.4)	44(22.7)	154(26.0)
No	1(1.6)	9(5.2)	2(1.3)	3(1.5)	15(2.5)
Not enough good	0(0.0)	5(2.8)	0(0.0)	3(1.5)	8(1.3)
Waste of time	1(1.6)	4(2.4)	2(1.3)	0(0.0)	7(1.2)
Don't know	2(3.3)	18(10.1)	25(15.7)	13(6.7)	58(9.8)
Total	61(100.0)	179(100.0)	159(100.0)	194(100.0)	593(100.0)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 15.

The only statistically significant difference in Trainer response distributions among combat arms was found in the USAREUR subsample ($\chi^2 = 32.01$, df = 15, $p < .007$). Here the most noticeable difference in distribution was that 25.0% of respondents in the Artillery group (as opposed to less than 10% of other combat arms) did not know whether or not TEC should be continued.

Battalion Interviewees were asked only for a "yes-or-no" response to the question of whether TEC should be continued. They were unanimous in responding that it should.

User and Unit Questionnaire respondents and Battalion Interviewees were also asked to indicate their preferences for TEC or other methods of study. More specifically, TEC Users were asked which method they would rather use to prepare for the Skill Qualification Test (SQT). Company/battery and battalion level personnel were asked which method of training they felt would best prepare the soldier for the SQT.

Frequencies of TEC Users and Unit Trainers preferring TEC to other methods of study are presented in Table 36. As shown in this table, most TEC Users preferred TEC to lectures, small group instruction and training films. Similar or larger percentages of Unit Trainers and Battalion Interviewees also preferred TEC to these methods. Percentages of Users, Trainers and Interviewees in each sample preferring TEC were, respectively: 78.1%, 77.4% and 92.9% over lectures; 64.3%, 67.7% and 71.4% over small group study; and 59.4%, 72.7% and 83.3% over training films.

Although a large majority of TEC Users (76.9%) preferred TEC to the Soldier's Manual, majorities of Unit Trainers (64.3%) and Battalion Interviewees (59.5%) showing this preference were somewhat smaller. It should be noted that several Interviewees refused to make a choice on this question and insisted that TEC and the Soldier's Manual must be used in conjunction for SQT Study. Respondents in all samples were somewhat evenly divided in preference between TEC and demonstrations with only 52.8% of Users, 45.9% of Trainers and 54.8% of Interviewees preferring TEC.

Most respondents in all samples preferred hands-on training to TEC whether exercises were done with models or actual equipment. Only 40.6% of Users, 30.8% of Trainers and 31.0% of Interviewees preferred TEC to exercises using models. Percentages preferring TEC over exercises using equipment were even smaller with only 36% of Users, 9% of Trainers and no Interviewees preferring TEC.

For both TEC User and Unit Trainer samples, distributions of preferences among Combat Arms were analyzed by Chi-square for each comparison within each subsample. Those groups which showed statistically significant ($p < .05$) differences are marked with an asterisk (*) in Table 36. These differences could reflect differences among combat arms in equipment availability, model and training film quality and/or the nature of tasks to be trained. To explore the nature of the differences and propose more specific reasons for them would require further analyses.

Table 36. TEC Users and Unit Trainers Preferring TEC over Other Methods of Study by Combat Arm and Subsample

Other Methods of SQT Study	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
Lectures					
CONUS-AC					
Users	61(80.3)[a]	145(69.4)	100(78.7)	132(78.6)	438(75.5)
Trainers	11(73.3)	49(71.0)	26(76.5)	48(71.6)	143(72.4)
USAREUR					
Users	33(70.2)	87(71.9)	46(90.2)	109(82.0)	170(48.9)
Trainers*	21(87.5)	37(67.3)	17(73.9)	47(88.7)	122(78.7)
CONUS-RC					
Users	2(40.0)	54(75.0)	172(83.5)	155(82.4)	383(81.3)
Trainers	8(88.9)	11(84.6)	51(86.4)	33(76.7)	103(83.1)
Total					
Users	96(75.0)	286(71.1)	318(82.8)	396(81.0)	1096(78.1)
Trainers	40(83.3)	97(70.8)	94(81.0)	128(78.5)	359(77.4)
Demonstrations					
CONUS-RC					
Users	38(51.4)	97(47.3)	69(55.2)	103(61.7)	307(53.8)
Trainers	9(66.7)	28(42.4)	18(50.0)	37(58.7)	92(51.1)
USAREUR					
Users	20(41.7)	50(42.7)	32(64.0)	68(51.1)	170(48.9)
Trainers	13(52.0)	22(40.0)	11(52.4)	24(43.6)	70(44.9)

Note. Those groups marked with Asterisks (*) are the ones in which differences among combat arms were significant ($p < .05$, Chi-square analysis).

[a] In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Ranges of cases missing per method: User: 226-277. Unit: 108-157.

Table 36. TEC Users and Unit Trainers Preferring TEC over Other Methods of Study by Combat Arm and Subsample

Other Methods of SQT Study	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-RC					
Users	2(50.0)[a]	24(32.9)	127(60.5)	106(56.4)	259(54.5)
Trainers	3(33.3)	5(38.5)	20(35.1)	18(47.4)	46(39.3)
Total					
Users	60(47.6)	171(43.3)	228(59.2)	277(56.8)	736(52.8)
Trainers	25(51.0)	55(41.0)	49(43.0)	79(50.6)	208(45.9)
Exercises Using Equipment					
CONUS-AC					
Users	14(17.9)	40(19.1)	33(25.0)	39(22.9)	126(21.4)
Trainers	1(5.9)	9(11.4)	5(13.5)	9(13.0)	24(11.9)
USAREUR					
Users*	10(21.3)	18(14.0)	15(30.6)	45(31.5)	88(23.9)
Trainers	1(3.6)	2(3.4)	2(7.7)	6(10.7)	11(6.5)
CONUS-RC					
Users*	0(0.0)	12(16.7)	65(31.8)	53(28.3)	130(27.7)
Trainers*	0(0.0)	1(7.1)	7(11.1)	0(0.0)	8(6.2)
Total					
Users	24(18.5)	70(17.1)	113(29.3)	137(36.0)	344(24.1)
Trainers	2(3.6)	12(7.9)	14(11.1)	15(9.0)	43(8.6)

Note. Those groups marked with asterisks (*) are the ones in which differences among combat arms were significant ($p < .05$, Chi-square analysis).

[a] In parentheses, beside each reported number of responses is shown the percentage of all responses for that combat arm and subsample that the number represents. Ranges of cases missing per method: User: 226-277; Unit: 108-157.

Table 36. TEC Users and Unit Trainers Preferring TEC over Other Methods of Study by Combat Arm and Subsample

Other Methods of SQT Study	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
Exercises Using Models					
CONUS-AC					
Users	27(37.0)[a]	69(33.7)	54(43.5)	73(44.5)	223(39.2)
Trainers	7(43.8)	17(24.6)	12(33.3)	22(33.3)	58(31.0)
USAREUR					
Users	20(42.6)	38(31.9)	20(40.8)	60(45.1)	138(39.7)
Trainers	10(40.0)	15(26.3)	71(33.3)	17(31.5)	49(31.2)
CONUS-RC					
Users	1(14.3)	19(25.7)	106(51.0)	79(41.8)	205(43.1)
Trainers	4(44.4)	3(23.1)	15(23.1)	14(25.0)	36(30.0)
Total					
Users	48(37.8)	126(31.7)	180(46.9)	212(43.8)	566(40.6)
Trainers	21(4.2)	35(25.2)	34(29.1)	53(80.3)	143(30.8)
Small Group Study					
CONUS-AC					
Users	46(63.9)	124(60.8)	71(56.3)	115(68.4)	356(62.5)
Trainers	9(56.3)	38(57.6)	26(68.4)	53(80.3)	126(67.7)
USAREUR					
Users	21(45.7)	70(58.9)	34(68.0)	89(66.4)	214(61.3)
Trainers	18(69.2)	38(69.1)	14(70.0)	38(67.9)	108(68.9)

Note. Those groups marked with asterisks (*) are the ones in which differences among combat arms were significant ($p < .05$, Chi-square analysis).

[a] In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Ranges of cases missing per method: User: 226-277; Unit: 108-157.

Table 36. TEC Users and Unit Trainers Preferring TEC over Other Methods of Study by Combat Arm and Subsample

(Page 4 of 5)

Other Methods of SQT Study	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-RC					
Users	3(50.0)[a]	38(53.5)	152(73.8)	129(69.4)	322(68.7)
Trainers	6(60.0)	9(75.0)	38(64.4)	28(68.3)	81(66.4)
Total					
Users	70(56.5)	232(58.9)	257(67.3)	333(68.2)	892(64.3)
Trainers	33(63.5)	85(63.9)	78(66.7)	119(73.0)	315(67.7)
Training Films					
CONUS-AC					
Users	44(61.1)	125(61.9)	76(58.5)	97(59.9)	342(60.4)
Trainers*	15(93.8)	41(64.0)	25(67.6)	58(89.2)	139(76.4)
USAREUR					
Users*	20(46.5)	62(52.5)	29(59.2)	91(65.9)	202(58.0)
Trainers	19(73.1)	40(75.5)	13(59.1)	32(62.7)	104(68.4)
CONUS-RC					
Users*	1(20.0)	29(40.3)	140(67.3)	111(58.7)	281(59.3)
Trainers	5(55.6)	9(75.0)	43(75.4)	28(71.8)	85(72.6)
Total					
Users	65(54.2)	216(55.1)	245(63.3)	299(61.1)	825(59.4)
Trainers	39(76.5)	90(69.8)	81(69.8)	118(76.1)	328(72.7)

Note. Those groups marked with asterisks (*) are the ones in which differences among combat arms were significant ($p < .05$, Chi-square analysis).

[a] In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Ranges of cases missing per method: User: 226-277; Unit: 108-157.

Table 36. TEC Users and Unit Trainers Preferring TEC over Other Methods of Study by Combat Arm and Subsample

Other Methods of SQT Study	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
Soldier's Manual					
CONUS-AC					
Users	53(72.6)[a]	152(75.2)	90(72.0)	116(71.6)	411(73.1)
Trainers *	13(86.7)	29(50.9)	25(73.5)	47(73.4)	114(67.1)
USAREUR					
Users*	34(70.8)	72(64.3)	41(83.7)	100(72.5)	247(71.2)
Trainers	13(48.1)	27(50.0)	14(58.3)	31(58.3)	85(53.8)
CONUS-RC					
Users	4(66.7)	66(91.7)	178(87.3)	151(82.1)	399(85.6)
Trainers	7(77.8)	9(69.2)	45(77.6)	24(70.6)	85(74.6)
Total					
Users	91(71.7)	290(75.1)	309(81.7)	367(75.8)	1057(76.9)
Trainers	33(64.7)	65(52.4)	84(72.4)	102(67.5)	284(64.3)

Note. Those groups marked with asterisks (*) are the ones in which differences among combat arms were significant ($p < .05$, Chi-square analysis).

[a] In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Ranges of cases missing per method: User: 226-277; Unit: 108-157.

REASONS FOR USE/NON-USE

All User Questionnaire respondents (both Users and Non-users) were given a list of 18 possible reasons for failure to use TEC and asked to indicate which ones were the reasons for their own lack of use. The first listed reason (User Question 15a) was, "I have never heard of TEC before today."

Responses to this statement are summarized in Table 37. As shown here, 35.3% of respondents had not previously heard of TEC. These respondents were eliminated from further analyses of reasons for non-use of TEC. Chi-square analyses showed the distributions of responses to differ by combat arm within the CONUS-RC subsample only ($\chi^2 = 116.41$, df = 6, $p < .001$). From examination of Table 37 this appears to be largely attributable to the large percentage (73.6%) of ADA respondents who had not heard of TEC.

Responses of those who had heard of TEC to the remaining 17 reasons are summarized in Table 38. Reasons for non-use most frequently cited were those pertaining to lack of knowledge about TEC and lack of emphasis on TEC by superiors. Those reasons were: "I have heard of TEC, but I do not know much about it." (35.1%); "I do not know where TEC materials are kept." (28.6%); "My superiors didn't tell me to use TEC." (28.5%); and "My Unit Trainer does not use TEC in our training program." (21.1%).

Other reasons frequently indicated were lack of needed lessons at the unit (23.3%),,, unavailability to TEC equipment (19.3%), not being allowed to study TEC during duty hours (18.3%) and the TEC study area being closed when needed (17.4%). Very few soldiers seemed to feel that they did not need the training they could get from TEC or that TEC training would not be beneficial (Reasons 3-7).

Also of interest were the other reasons given by respondents (Question 15t). A total of 231 people listed additional reasons. Many of these were similar to those already considered. Seventeen (17) respondents mentioned lack of emphasis on TEC use and 18 mentioned unavailability of the facilities or equipment when needed. Twenty-three (23) men felt that they were uninformed about TEC and 28 felt that lessons were needed on additional topics. A large number of those commenting (74) complained about lack of time for TEC study during duty hours, and 42 men simply were not interested in TEC. Many of these felt that TEC lessons were too simple and/or boring.

TEC Users were also questioned about the reasons why they do use TEC. A predetermined list of reasons for TEC use were given and they were asked to mark all that applied to them. Responses are summarized in Table 39. Those reasons marked by the greatest frequencies of respondents were: To learn something new (64.3%); to review (59.0%); and to increase job ability (53.2%). These reasons are highly similar to the purposes listed for most uses during Phase 1 (Tables 11 and 12), initial and refresher training.

Table 37. User Questionnaire Responses to the Statement, "I have never heard of TEC before today." by Combat Arm and Subsample

Responses	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
True	60(32.1)[a]	163(36.1)	176(42.6)	159(41.5)	558(38.9)
False	107(57.2)	253(56.1)	205(49.6)	204(53.3)	769(53.6)
Uncertain	20(10.7)	35(7.8)	32(7.7)	20(5.2)	107(7.5)
USAREUR					
True	28(28.0)	72(28.7)	37(28.9)	62(27.1)	199(28.1)
False	61(61.0)	161(64.1)	83(64.8)	154(67.2)	459(64.8)
Uncertain	11(11.0)	18(7.2)	8(6.3)	13(5.7)	50(7.1)
CONUS-RC					
True	103(73.6)	58(34.5)	110(31.1)	79(23.6)	350(35.1)
False	29(20.7)	97(57.7)	223(63.0)	232(69.3)	581(58.3)
Uncertain	8(5.7)	13(7.7)	21(5.9)	24(7.2)	66(6.6)
Total					
True	191(44.7)	293(33.7)	323(36.1)	300(31.7)	1107(35.3)
False	197(46.1)	511(58.7)	511(57.1)	590(62.3)	1809(57.6)
Uncertain	39(9.1)	66(7.6)	61(6.8)	57(6.0)	223(7.1)

[a] In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 265.

Table 38. User Questionnaire Respondents Agreeing with Reasons for Lack of TEC Use

(Page 1 of 2)

Reasons	Subsample			
	CONUS-AC	USAREUR	CONUS-RC	Total
1. Do not know much about TEC	283(37.1)*	156(34.4)[a]	190(33.0)	629(35.1)
2. Do not know where TEC materials are kept	262(34.6)	104(22.9)	145(25.2)*	511(28.6)
3. Do not need any additional training	60(7.9)*	29(6.4)	24 (4.2)*	113(6.3)
4. Do not need TEC training	64(8.4)	44(9.6)*	46(8.0)	154(8.6)
5. TEC will not help me get promoted	110(14.4)*	60(13.2)	73(12.7)	243(13.6)
6. TEC will not help me pass SQT	72(9.5)	31(6.8)	32(5.6)	135(7.6)
7. TEC will not help me do my job better	79(10.4)	44(9.7)	27(4.7)	150(8.4)
8. My superiors did not tell me to use TEC	262(34.4)	141(31.3)	106(18.5)*	509(28.5)
9. Unit trainer does not use TEC in training	211(27.8)	84(18.5)	82(14.2)	377(21.1)
10. Unit does not have needed lessons	172(22.9)	111(24.6)	130(22.7)	413(23.3)
11. TEC equipment is often broken	49(6.5)*	52(11.4)	22(3.8)	123(6.9)
12. TEC equipment is often unavailable	158(20.9)	91(20.1)	95(16.7)*	344(19.3)

Note. Asterisks (*) denote subsamples where responses differed significantly ($p<.05$), Chi-square analysis) by combat arm.

[a] In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents.

Table 38. User Questionnaire Respondents Agreeing with Reasons for Lack of TEC Use

(Page 2 of 2)

Reasons	Subsample			
	CONUS-AC	USAREUR	CONUS-RC	Total
13. Others using lessons when I need them	111(14.7)	64(14.0)	59(10.4)*	234(13.1)
14. TEC area closed when I need it	157(20.8)	83(18.3)	70(12.3)*	310(17.4)
15. Do not like to study in TEC facility	117(15.5)	69(15.3)	52(9.1)	238(13.4)
16. Not allowed to study TEC while on duty	185(24.5)	89(19.6)*	52(9.1)	326(18.3)
17. TEC area too far away	70(9.2)	22(4.8)*	76(13.3)*	168(9.4)

Note. Asterisks (*) denote subsamples where responses differed significantly ($p < .05$), Chi-square analysis) by combat arm.

In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents.

Table 39. TEC Users Reasons for TEC Use by Combat Arm and Subsample

(Page 1 of 2)

Reasons for Use	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
SQT Preparation	21(23.9)[a]	133(58.8)	57(39.6)	122(63.2)	333(51.9)
Promotion Board	10(12.7)	55(24.3)	24(16.7)	59(30.6)	148(23.1)
Learn Something New	49(62.0)	142(62.8)	87(60.4)	119(61.7)	397(61.8)
Learn New MOS	20(25.3)	62(27.4)	45(31.3)	53(27.5)	180(28.0)
Review	42(53.2)	130(57.5)	88(61.1)	108(56.0)	368(57.3)
ARTEP Preparation	18(22.8)	57(25.2)	33(22.9)	37(19.2)	145(22.6)
Interest	34(43.0)	83(36.7)	58(40.3)	93(48.2)	268(41.7)
Increase Job Ability	44(55.7)	108(47.8)	76(52.8)	99(51.3)	327(50.9)
Prepare to Teach	27(34.2)	94(41.6)	58(40.3)	99(51.3)	278(43.3)
USAREUR					
SQT Preparation	30(60.0)	72(50.3)	17(29.3)	113(76.4)	232(50.1)
Promotion Board	12(24.0)	32(22.4)	9(15.5)	41(27.7)	94(23.6)
Learn Something New	30(60.0)	89(62.2)	37(63.8)	90(60.8)	246(61.7)
Learn New MOS	16(32.0)	37(25.9)	11(19.0)	42(28.4)	106(26.6)
Review	30(60.0)	86(60.1)	35(60.3)	91(61.5)	242(60.7)
ARTEP Preparation	19(38.0)	45(31.5)	17(29.3)	41(27.7)	122(30.6)
Interest	15(30.0)	49(34.3)	26(44.8)	71(48.0)	161(40.4)
Increase Job Ability	29(58.0)	65(45.5)	28(48.3)	88(59.5)	210(52.6)
Prepare to Teach	24(48.0)	65(45.5)	21(36.2)	76(51.4)	186(46.7)

[a]Total respondents included: 642, CONUS-AC; 397, USAREUR; 502, CONUS-RC. These could mark all reasons that applied. In parentheses beside each number is shown the percentage of all respondents in that combat arm and subsample that marked that response.

Table 39. TEC Users Reasons for TEC Use by Combat Arm and Subsample

Reasons for Use	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-RC					
SQT Preparation	0(0.0)	28(34.1)	80(36.7)	67(34.4)	175(34.9)
Promotion Board	0(0.0)	16(19.5)	46(21.1)	28(14.4)	90(17.9)
Learn Something New	6(85.7)	59(72.0)	149(68.3)	135(69.2)	349(69.5)
Learn New MOS	1(14.3)	29(35.4)	100(51.3)	57(29.2)	187(37.3)
Review	2(28.6)	58(70.7)	119(54.6)	122(62.6)	301(60.0)
ARTEP Preparation	1(14.3)	20(24.4)	107(54.9)	63(32.3)	191(38.0)
Interest	2(28.6)	27(32.9)	90(41.3)	76(39.0)	195(38.8)
Increase Job Ability	2(28.6)	43(52.4)	143(65.6)	96(49.2)	284(56.6)
Prepare to Teach	2(28.6)	24(29.3)	112(51.4)	93(47.7)	231(46.0)
Total					
SQT Preparation	51(37.5)	233(51.7)	154(36.7)	302(56.3)	740(48.0)
Promotion Board	22(16.2)	103(22.8)	79(18.8)	128(23.9)	332(21.)
Learn Something New	85(62.5)	290(64.3)	273(65.0)	344(64.2)	992(64.3)
Learn New MOS	37(27.2)	128(28.4)	156(37.1)	152(28.4)	473(30.7)
Review	74(54.4)	274(60.8)	242(57.6)	321(59.9)	911(59.0)
ARTEP Preparation	38(27.9)	122(27.1)	157(37.4)	141(26.3)	458(29.7)
Interest	51(37.5)	159(35.3)	174(41.4)	240(44.8)	624(40.4)
Increase Job Ability	75(55.1)	216(47.9(	247(58.8)	283(52.8)	821(53.2)
Prepare to Teach	53(39.0)	183(40.6)	191(45.5)	268(50.0)	695(45.0)

[a]Total respondents included: 642, CONUS-AC; 397, USAREUR; 502, CONUS-RC. These could mark all reasons that applied. In parentheses beside each number is shown the percentage of all respondents in that combat arm and subsample that marked that response.

SQT preparation was the next most frequently mentioned reason for TEC study (48.0%). (Due to the timing of the survey, this latter result may have been affected by the stage of each unit's introduction to SQT testing.)

Although respondents were also given the opportunity to list other reasons for TEC use, few (21) did so. Those reasons given pertained to individual training needs, e.g., reclassified MOS, gunnery training.

Unit Trainers were asked to indicate on a 5-point scale ("no extent" to "quite an extent") the extent to which TEC was used for various training tasks in the unit. Mean responses for each combat arm and subsample (Table 40) show that TEC was used to a small or moderate extent for most tasks.

Mean responses for each subsample on extent of TEC use with field exercises, concurrent training and promotion board preparation are 2.00 or less showing that TEC is generally used to a small extent for these types of training. Subsample means for remedial, make-up, and follow-up training and skill practice exercises also tend to cluster around scale point 2. Subsample means for other tasks ranged between Scale points 2 and 3, reflecting a small to moderate amount of TEC use for each type of task. No additional specific tasks for which TEC was used was listed by respondents except for maintenance classes.

Battalion Interviewees were questioned about the types of battalion level training TEC is used for, specific events influencing TEC use in the battalion and their own opinions on the objectives of the TEC program. Regarding types of training, 28 of 42 respondents (66.7%) stated that TEC is used to upgrade enlisted qualifications, 47.6% stated that it is used in NCO training, 26.2% stated that TEC is used as part of criterion testing, and 14.3% stated that it is used as part of incentive programs.

Thirty (30) interviewees also suggested additional ways in which TEC is used in battalion training. Most frequently mentioned uses were for individual training (7), MOS reclassification (6), and SQT (5). Also mentioned were officer training, small density MOS training, instructor preparation, and advanced skills learning. Other comments generally related to specific topics or purposes of instruction, e.g., First Aid, Expert Infantry Badge (EIB) preparation.

When asked specifically how TEC is used in training, most Interviewees (75% or more in each case) agreed that it is used at least sometimes in lecture preparation, instead of lectures, to supplement lectures and demonstrations, for individual study, and to prepare for hands-on training.

Specific events temporarily influencing TEC use rates within the battalions were also discussed by Interviewees. The event listed most often (27 times) as increasing TEC use was SQT preparation. This was followed by inclement weather (14) and preparation for various training and testing events (ARTEP, 12; EIB, field training preparation, etc., 19). Field training was the event most often mentioned (20 times) as temporarily

Table 40. Unit Trainer Reports of the Extent to Which TEC is Used for Each of 18 Training Tasks by Combat Arm and Subsample

(Page 1 of 4)

Training Tasks	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
SQT Preparation					
CONUS-AC	2.84	2.25	2.41	2.78	2.51*
USAREUR	2.70	2.63	1.92	3.12	2.67*
CONUS-RC	1.57	3.24	1.81	2.72	2.26*
Promotion Board					
CONUS-AC	2.32	1.69	2.17	2.09	1.98*
USAREUR	1.57	1.87	1.65	2.48	1.99*
CONUS-RC	1.29	3.06	1.54	2.21	1.91*
Initial Training					
CONUS-AC	2.37	1.95	2.50	2.12	2.15
USAREUR	2.60	2.41	1.76	2.56	2.37
CONUS-RC	1.64	3.53	2.53	2.96	2.72*
Training for New MOS					
CONUS-AC	2.42	1.99	2.33	2.38	2.23*
USAREUR	2.27	2.37	1.89	2.61	2.34*
CONUS-RC	1.29	3.59	2.58	2.87	2.70*
Refresher Training					
CONUS-AC	2.63	2.16	2.46	2.47	2.36*
USAREUR	3.17	3.09	2.00	2.98	2.87*
CONUS-RC	1.71	3.29	2.49	3.19	2.75*

Note: Extent of TEC use response scale was: 1-none; 2-little; 3-moderate; 4-quite; 5-great. Asterisks (*) denote subsamples where response distributions differed significantly ($p<.05$, chi-square analysis) by combat arm.

Table 40. Unit Trainer Reports of the Extent to Which TEC is Used for Each of 18 Training Tasks by Combat Arm and Subsample
(Page 2 of 4)

Training Tasks	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
ARTEP Preparation					
CONUS-AC	2.16	1.84	1.83	1.96	1.91
USAREUR	2.53	2.63	1.54	2.23	2.28*
CONUS-RC	1.29	3.06	2.36	2.51	2.41*
Information of Interest					
CONUS-AC	1.95	2.13	2.06	2.07	2.08
USAREUR	2.20	2.03	1.68	2.58	2.17
CONUS-RC	1.50	3.12	2.01	2.40	2.23*
Increase Soldier's Job Ability					
CONUS-AC	2.58	2.08	2.35	2.41	2.29*
USAREUR	2.80	2.75	1.89	2.88	2.64*
CONUS-RC	1.36	3.59	2.50	2.98	2.69*
Prepare Trainers to Teach					
CONUS-AC	2.74	2.13	2.35	2.44	2.32*
USAREUR	2.47	2.34	1.86	2.83	2.43*
CONUS-RC	1.43	3.65	2.18	2.77	2.48*

Note: Extent of TEC use response scale was: 1-none; 2-little; 3-moderate; 4-quite; 5-great. Asterisks (*) denote subsamples where response distributions differed significantly ($p < .05$, chi-square analysis) by combat arm.

Table 40. Unit Trainer Reports of the Extent to Which TEC is Used for Each of 18 Training Tasks by Combat Arm and Subsample

(Page 3 of 4)

Training Tasks	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
Slow-Paced Individual Training					
CONUS-AC	2.47	2.03	2.43	2.08	2.17*
USAREUR	2.53	2.10	1.78	2.64	2.17*
CONUS-RC	1.43	3.00	2.14	2.66	2.36*
Remedial Training					
CONUS-AC	2.16	1.86	1.96	2.08	1.98*
USAREUR	1.21	2.94	2.00	2.21	2.12*
CONUS-RC	2.67	2.16	1.51	2.47	2.22*
Make-up Training					
CONUS-AC	2.00	1.86	1.94	2.13	1.98
USAREUR	2.00	2.07	1.35	2.39	2.03*
CONUS-RC	1.21	2.94	1.89	2.17	2.06*
Follow-up Training					
CONUS-AC	2.11	1.98	2.20	2.01	2.05
USAREUR	2.30	2.19	1.51	2.29	2.11
CONUS-RC	1.43	3.00	2.18	2.15	2.20*
With Field Exercises					
CONUS-AC	1.79	1.74	1.56	1.58	1.65*
USAREUR	1.83	2.07	1.03	1.91	1.79
CONUS-RC	1.00	2.41	1.49	2.02	1.72*

Note. Extent of TEC use response scale was: 1-None; 2-Little; 3-Moderate;4-Quite; 5-Great. Asterisks(*) denote subsamples where response distributions differed significantly ($p < .05$, Chi-square analysis) by combat arm.

Table 40. Unit Trainer Reports of the Extent to Which TEC is Used for Each of 18 Training Tasks by Combat Arm and Subsample

Training Tasks	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
Inclement Weather Training					
CONUS-AC	2.42	1.93	2.09	2.24	2.10
USAREUR	2.87	2.22	1.46	2.64	2.31*
CONUS-RC	1.14	3.24	2.24	2.91	2.49*
With Skill Practice Exercises					
CONUS-AC	1.95	1.91	1.83	1.95	1.91
USAREUR	2.13	2.18	1.27	2.48	2.10*
CONUS-RC	1.07	2.82	1.76	2.68	2.13*
Fill Up Slack Periods					
CONUS-AC	2.37	1.92	2.00	2.04	2.01*
USAREUR	2.43	2.13	1.38	2.65	2.21*
CONUS-RC	1.29	3.00	2.22	3.02	2.49*
Concurrent Training at Ranges					
CONUS-AC	1.63	1.80	1.24	1.58	1.59
USAREUR	1.90	2.26	1.11	1.79	1.84*
CONUS-RC	1.00	2.71	1.58	2.64	2.00*

Note: Extent of TEC use response scale was: 1-none; 2-little; 3-moderate; 4-quite; 5-great. Asterisks (*) denote subsamples where response distributions differed significantly ($p < .05$, chi-square analysis) by combat arm.

decreasing TEC use. Other events mentioned were ARTEP participation, maintenance, Annual General Inspection (AGI) preparation and various taskings/details. Nine (9) Interviewees also noted that TEC Use was affected by the Unit Training Cycle.

Finally, Interviewees gave their ideas as to the objectives of the TEC program. Most often mentioned objectives were individual training (15) and instructor assistance (12). Other training objectives mentioned were squad-level training (9), review (4), teaching MOS skills (5), and hands-on preparation (5). Only 5 Interviewees mentioned SQT preparation as a TEC objective. Eight (8) Interviewees thought of TEC primarily as a convenient training aid or resource. Others mentioned TEC advantages such as training standardization (3), self-pacing (5), multi-modality (3), and audio/visual aid for slow learners or non-readers (3).

COMMAND EMPHASIS

Most TEC Users (76.6%) reported that they would use TEC even if not told to. Responses are summarized by combat arm and subsample in Table 41. Response frequencies varied by combat arm only within CONUS-AC ($\chi^2 = 11.56$, $df = 3$, $p<.01$).

However, most Users (69.2%) also felt that their unit commanders wanted them to use TEC (Table 42). Only 1.5% felt their commanders did not want them to use TEC and 29.3% did not know. Response distributions varied significantly ($p<.02$) by combat arm in the USAREUR ($\chi^2 = 16.58$, $df = 6$) and CONUS-RC ($\chi^2 = 15.68$, $df = 6$) subsamples.

In order to get a more complete picture of the extent of command emphasis on TEC, Unit Trainers were asked to indicate the extent of emphasis from both company/battery and battalion commanders. Respondents used a 5-point scale ranging from "No emphasis" (1) to "Quite an extent of emphasis" (5). Responses to this scale are summarized in Table 43. Summary means for each subsample ranged from 2.17 to 2.84 indicating a small to moderate amount of command emphasis on TEC by both company/battery and battalion commanders.

Trainers were also asked to indicate ways in which TEC use was encouraged by themselves and their superiors. Responses, summarized in Table 44, show that most Trainers (61.1 - 69.9% per subsample) themselves used announcements as a means of TEC use encouragement. Briefings and specific orders/requests were next most frequently marked (31.7 - 45.5% and 30.5 - 43.1% per subsample, respectively). Fewer Trainers used general commands (3.1 - 24.2% per subsample) and very few indicated having used recognition to encourage TEC use (4.9 - 7.4% per subsample).

With regard to their superiors, most Trainers (58.9 - 62.0% per subsample) again indicated that announcements were used to encourage TEC

Table 41. TEC Users Stating They Would Use TEC even if not Told to by Combat Arm and Subsample

Subsample	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC	59(69.4)[a]	172(76.1)	108(69.7)	163(83.6)	502(75.9)
USAREUR	35(71.4)	105(73.9)	42(70.0)	125(82.2)	307(76.2)
CONUS-RC	13(76.5)	58(69.9)	181(82.6)	153(76.1)	405(77.9)
Total	107(70.9)	335(74.3)	331(76.3)	441(80.5)	1214(76.6)

[a] In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents.

Table 42. TEC Users Opinions Concerning Whether Unit Commanders Want Them to Use TEC by Combat Arm and Subsample

Does the commander of your unit want you to use TEC materials?	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Yes	44(51.2)[a]	141(60.5)	96(62.3)	124(64.2)	405(60.8)
No	0(0.0)	1(.4)	1(.6)	3(1.6)	5(.8)
Don't Know	42(48.8)	91(39.1)	57(37.0)	66(34.2)	256(38.4)
Total	86(100.0)	233(100.0)	154(100.0)	193(100.0)	666(100.0)
USAREUR					
Yes	41(82.0)	97(66.4)	31(50.0)	108(70.1)	277(67.2)
No	1(2.0)	2(1.4)	0(0.0)	2(1.3)	5(1.2)
Don't Know	8(16.0)	47(32.2)	31(50.0)	44(28.6)	130(31.6)
Total	50(100.0)	146(100.0)	62(100.0)	154(100.0)	412(100.0)
CONUS-RC					
Yes	11(64.7)	65(76.5)	183(84.3)	166(81.8)	425(81.4)
No	0 (0.0)	2(2.4)	10(4.6)	2(1.0)	14(2.7)
Don't Know	6(35.3)	18(21.2)	24(11.1)	35(17.2)	83(15.9)
Total	17(100.0)	85(16.3)	217(100.0)	203(100.0)	522(100.0)
Total					
Yes	96(62.7)	303(65.3)	310(71.6)	398(72.4)	1107(69.2)
No	1 (.7)	5(1.1)	11(2.5)	7(1.3)	24(1.5)
Don't Know	56(36.6)	156(33.6)	112(25.9)	145(26.4)	469(29.3)
Total	153(100.0)	464(100.0)	433(100.0)	550(100.0)	1600(100.0)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 52.

Table 43. Unit Trainer Reports of Extent of Command Emphasis by Combat Arm and Subsample

Source of Emphasis	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Company	2.47(19)[a]	2.11(95)	2.72(54)	2.55(85)	2.42(253)
Battalion	2.32(19)	1.98(95)	2.22(54)	2.32(85)	2.17(253)
USAREUR					
Company	3.03(30)	2.66(68)	1.59(37)	3.03(66)	2.64(201)
Battalion	2.50(30)	2.46(68)	1.78(37)	3.31(66)	2.62(201)
CONUS-RC					
Company	1.21(14)	3.41(17)	2.64(74)	3.09(47)	2.76(152)
Battalion	1.71(14)	3.18(17)	2.74(74)	3.13(47)	2.84(152)

Note. Amount of emphasis indicated on response scale is: 1-none; 2-little; 3-moderate; 4-quite; 5-great.

[a]Number of respondents in parentheses.

Table 44. Unit Trainer Reports of Means of TEC Use Encouragement by Combat Arm and Subsample

Means of TEC Use Encouragement	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Selves					
General Commands	3(23.1)[a]	15(23.1)	12(25.5)	16(24.6)	46(24.2)
Orders/Requests	3(23.1)	19(29.2)	16(34.0)	20(30.8)	58(30.5)
Announcements	11(84.6)	32(49.2)	31(66.0)	42(64.6)	116(61.1)
Briefings	4(30.8)	22(33.8)	20(42.6)	25(38.5)	71(37.4)
Recognition	0(0.0)	4(6.2)	4(8.5)	6(9.2)	14(7.4)
Total Respondents	13(100.0)	65(100.0)	47(100.0)	65(100.0)	190(100.0)
Superiors					
General Commands	3(20.0)	15(24.2)	8(17.8)	20(34.5)	46(25.6)
Orders/Requests	5(33.3)	14(22.3)	11(24.4)	12(20.7)	42(23.3)
Announcements	10(66.7)	34(54.8)	27(60.0)	35(60.3)	106(58.9)
Briefings	6(4.7)	20(32.3)	17(37.8)	18(31.0)	61(33.9)
Recognition	1(.7)	2(3.2)	1(2.2)	4(6.9)	8(4.4)
Total Respondents	15(100.0)	62(100.0)	45(100.0)	58(100.0)	180(100.0)
USAREUR					
Selves					
General Commands	3(12.0)	10(17.9)	3(12.0)	8(14.5)	24(14.9)
Orders/Requests	10(40.0)	22(39.3)	5(20.0)	17(30.9)	54(33.5)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents.

Table 44. Unit Trainer Reports of Means of TEC Use Encouragement by Combat Arm and Subsample

(Page 2 of 3)

Means of TEC Use Encouragement	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
USAREUR (Cont'd)					
Announcements	20(80.0)	33(58.9)	19(76.0)	40(72.7)	112(69.6)
Briefings	7(28.0)	17(30.4)	8(32.0)	19(34.5)	51(31.7)
Recognition	0(0.0)	5(13.9)	2(7.3)	4(7.3)	11(6.8)
Total Respondents	25(100.0)	56(100.0)	25(100.0)	55(100.0)	161(100.0)
Superiors					
General Commands	6(22.2)	13(25.0)	6(23.0)	12(22.6)	37(23.4)
Orders/Requests	9(33.3)	18(34.6)	2(7.7)	17(32.1)	46(29.1)
Announcements	18(66.7)	30(57.7)	15(57.7)	35(66.0)	98(62.0)
Briefings	9(33.3)	20(38.5)	12(46.2)	19(35.8)	60(38.0)
Recognition	1(3.7)	2(3.8)	0(0.0)	2(3.8)	5(3.2)
Total Respondents	27(100.0)	52(100.0)	26(100.0)	53(100.0)	158(100.0)
CONUS-RC					
Selves					
General Commands	4(40.0)	3(17.6)	17(32.1)	14(32.6)	38(3.1)
Orders/Requests	6(60.0)	8(47.1)	19(35.8)	20(46.5)	53(43.1)
Announcements	5(50.0)	10(58.8)	34(64.2)	27(62.8)	76(62.6)
Briefings	4(40.0)	11(64.7)	21(39.6)	19(44.2)	56(45.5)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents.

Table 44. Unit Trainer Reports of Means of TEC Use Encouragement by Combat Arm and Subsample

Means of TEC Use Encouragement	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-RC (Cont'd)					
Recognition	2(20.0)	0(0.0)	2(3.8)	2(4.7)	6(4.9)
Total Respondents	10 (100.0)	17(100.0)	53(100.0)	43(100.0)	123(100.0)
Superiors					
General Commands	3(37.5)	4(25.0)	16(30.2)	16(35.6)	39(32.0)
Orders/Requests	3(37.5)	8(50.0)	23(43.4)	13(28.9)	47(38.5)
Announcements	4(50.0)	11(68.8)	29(54.7)	29(64.4)	73(59.8)
Briefings	5(62.5)	10(62.5)	26(49.1)	24(53.3)	65(53.3)
Recognition	2(25.0)	0(0.0)	1(1.9)	0(0.0)	3(2.5)
Total Respondents	8(100.0)	16(100.0)	53(100.0)	45(100.0)	122(100.0)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents.

use. Next most frequently indicated were briefings (37.4 - 53.3% per subsample). Specific orders/requests (23.3 - 38.5%) per subsample) and general commands (23.4 - 32.0% per subsample) were marked by similar numbers of Trainers as being used by their superiors. Very few Trainers (2.5 - 4.4% per subsample) indicated that their superiors used recognition to encourage TEC use.

Only 10 respondents listed additional ways in which TEC use was encouraged either by their superiors or themselves. These included: pro pay, SQT emphasis, classroom TEC use, additional assembly pay, and discussions with leaders.

Battalion Interviewees were also asked to list the ways in which they encouraged TEC use. A suggested list was provided (Question 13, Battalion Interview Schedule) but most responded with individual descriptions. Most frequently listed were weekly or monthly meetings (16 of 42 interviewees). The second most frequently named means of encouragement was written publications (updated lists of available lessons, 8; training memos, letters, circulars, 5). Several respondents (9) indicated TEC use was encouraged through various means of incorporation into monthly or quarterly training schedules such as citing lesson numbers for specific training topics. Six (6) respondents stated that TEC was encouraged in conjunction with SQT emphasis and 6 responded that TEC use encouragement to soldiers was left to training NCOs. Other means listed included special briefings (4), verbal announcements (4), recognition (1), and posters (1).

Interviewees were asked to indicate the extent of command emphasis on TEC from higher levels of command on the same 5-point scale given to Unit Trainers. The modal response was 3 - "a moderate extent" indicated by 15 (35.7%) Interviewees. The mean response was 2.71. Respondents were also asked what they felt the primary source of the emphasis to be. Most were evenly split between brigade and division levels and several mentioned other sources, e.g., Corps, State Level AG.

USAGE PATTERNS

TEC Users were questioned about several aspects of their practices and preferences regarding of TEC use. Mean responses are presented in Table 45. For these questions, responses indicated how often users used or preferred to use TEC in the stated way: 1 - Almost Always; 2 - Often; 3 - Sometimes; 4 - Almost Never.

Results showed the mean frequency with which TEC users have individual machines to be 2.83. This is closest to scale response 3, "Sometimes." The mean response to the question regarding machine preference was 2.36. This difference might indicate that TEC Users would prefer to have individual machines somewhat more often than they do. However, the difference was not analyzed for statistical significance. It should also

Table 45. Average Frequencies of TEC User Practices and Preferences by Combat Arm and Subsample.

	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
One Man Per Machine Use					
CONUS-AC	3.04(83)[a]	2.85(230)	2.78(150)	2.59(193)	2.78(656)
USAREUR	3.14(49)	2.73(147)	2.92(61)	2.67(149)	2.79(406)
CONUS-RC	3.06(17)	3.13(86)	2.76(221)	3.00(204)	2.92(528)
Total	3.07(149)	2.87(463)	2.79(432)	2.77(546)	2.83(1590)
Prefer One Man Per Machine					
CONUS-AC	2.15(84)	2.32(229)	2.27(150)	1.95(192)	2.18(655)
USAREUR	2.49(49)	2.41(145)	2.18(60)	2.13(152)	2.28(406)
CONUS-RC	2.35(17)	2.71(86)	2.56(221)	2.75(203)	2.65(527)
Total	2.29(150)	2.42(460)	2.41(431)	2.29(547)	2.36(1588)
Have Trainer Assistance					
CONUS-AC	2.20(83)	2.18(227)	2.19(150)	2.22(190)	2.20(650)
USAREUR	2.42(48)	2.06(143)	2.39(59)	2.16(150)	2.19(400)
CONUS-RC	2.06(16)	2.22(87)	1.98(221)	2.11(201)	2.07(525)
Total	2.26(147)	2.15(457)	2.11(430)	2.16(541)	2.15(1575)
Prefer Trainer Assistance					
CONUS-AC	2.16(83)	2.00(226)	2.07(147)	2.19(190)	2.09(646)
USAREUR	2.14(49)	2.06(143)	2.24(59)	2.00(151)	2.07(402)
CONUS-RC	2.82(17)	2.09(86)	1.86(24)	1.97(201)	1.97(525)
Total	2.23(149)	2.04(455)	1.99(427)	2.05(542)	2.05(1573)
Study TEC Off Duty					
CONUS-AC	3.55(83)	3.37(228)	3.51(151)	3.14(187)	3.36(649)
USAREUR	3.53(49)	3.32(144)	2.29(59)	3.18(152)	3.29(404)
CONUS-RC	3.47(17)	3.51(85)	3.37(218)	3.58(199)	3.48(519)
Total	3.54(149)	3.38(457)	3.41(428)	3.31(538)	3.38(1572)

Note. Response scale is as follows: 1-Almost always; 2-Often; 3-Sometimes; 4-Almost never.

[a]Numbers of respondents in parentheses.

Table 45. Average Frequencies of TEC User Practices and Preferences by Combat Arm and Subsample.

	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
Prefer to Study Off Duty					
CONUS-AC	3.41(82)	3.30(221)	3.40(147)	3.09(190)	3.28(640)
USAREUR	3.44(50)	3.43(138)	3.28(58)	3.14(147)	3.30(393)
CONUS-RC	3.24(17)	3.29(86)	3.21(217)	3.39(195)	3.29(515)
Total	3.40(149)	3.34(445)	3.29(422)	3.22(532)	3.29(1548)
Prefer to Study TEC On Their Own					
CONUS-AC	2.18(82)	2.56(229)	2.39(150)	2.06(193)	2.33(654)
USAREUR	2.51(49)	2.43(143)	2.18(60)	2.15(151)	2.30(403)
CONUS-RC	2.53(17)	2.77(86)	2.61(218)	2.77(201)	2.70(522)
Total	2.33(148)	2.56(458)	2.47(428)	2.35(545)	2.44(1579)

Note. Response scale is as follows: 1-Almost always; 2-Often; 3-Sometimes; 4-Almost never.

[a]Numbers of respondents in parentheses.

be recalled that Phase 1 data (Table 4) indicated that users do not have individual CUE-SEEs in a large majority of TEC group uses and that in 74.9% of all group uses (Table 15) the lesson is projected for the entire group.

The next set of questions referred to user practices and preferences with regard to trainer assistance. Overall means (2.15 and 2.05 respectively) showed that, on the average, Users had and preferred trainer assistance often while using TEC. Responses to the question of how often TEC Users studied TEC off-duty yielded a mean of 3.38. The mean for preference for off-duty study was similar (3.29) with both falling between "sometimes" and "almost never". These findings are consistent with Phase 1 results which showed that only 11.9% of TEC individual uses and 3.4% of TEC group uses occurred off-duty. Finally a mean response of 2.44 indicated that TEC Users prefer on the average to study TEC on their own more than sometimes but not often.

On the same response scale, those Unit Trainers who had used TEC with groups of soldiers (see Unit Question 3a) were asked to indicate how often they monitored the soldiers' work while the latter were using TEC. Mean responses (overall mean 1.77) for each group, shown in Table 46, indicate that Trainers most often do monitor soldiers' TEC studies.

Another question of concern with regard to TEC usage patterns is use of LAI pretests. Accordingly, Unit Trainers were asked to indicate the ways in which pretests were used. Responses are summarized in Table 47. Overall, 41.8% of Trainers indicated that pretests were not used. Of those indicating pretests were used, most stated that they were used to assess for initial or refresher training. Very few respondents listed additional ways in which pretests were used. Those who did, mentioned use of the pretests as lesson previews, refreshers, worksheets with the lesson and for SQT study.

TEC users as well as Unit Trainers were asked if they felt that LAI Pretests were useful (Table 48). Just over half of both User (54.7%) and Trainer (54.0%) samples felt that they were. Substantial percentages (33.5 and 41.2%, respectively) did not know. Response distributions for Users varied by combat arm in the CONUS-AC (χ^2= 18.60, df = 9, $p<.03$ and USAREUR (χ^2 = 20.32, df = 9, p .02) subsamples and for Trainers in the USAREUR subsample (χ^2= 32.86, df = 12, $p<.002$). It might be recalled that results from Phase 1 shown in Tables 19 and 20 showed a number of instances of low or no pretest use which suggests an explanation for the substantial percentage of Phase 2 users being too unfamiliar with the pretest to judge its usefulness.

Table 46. Mean Reported Frequencies of Unit Trainer Monitoring of Soldier's Work By Combat Arm and Subsample

Frequency of Monitoring	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC	1.86 (7)[a]	1.71 (38)	1.60 (20)	1.74 (46)	1.71 (111)
USAREUR	1.58 (19)	1.81 (42)	2.30 (10)	1.74 (42)	1.79 (113)
CONUS-RC	1.00 (3)	1.50 (12)	2.15 (41)	1.61 (33)	1.82 (89)
Total	1.59 (29)	1.73 (92)	2.01 (71)	1.70 (121)	1.77 (313)

Note. Response scale is: 1-almost always; 2-often; 3-sometimes; 4-almost never.

[a]Number of respondents in parentheses.

Table 47. Unit Trainer Reports of Ways in which LAI Pretests are Used by Combat Arm and Subsample

Ways LAI Pretests are Used	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Not Used	8(50.0)[a]	38(46.9)	21(47.7)	24(33.3)	91(42.7)
Assess for Initial Training	8(50.0)	15(18.5)	16(36.4)	20(27.8)	59(27.7)
Assess for Refresher Training	4(25.0)	16(19.8)	10(22.7)	20(27.8)	50(23.5)
Proficiency Exams	1(6.3)	11(13.6)	4(9.1)	15(20.8)	31(14.6)
Assess for Unit Readiness	3(18.8)	12(14.8)	9(20.5)	12(16.7)	36(16.9)
Other	0(0,0)	9(11.1)	3(6.8)	7(9.7)	19(8.9)
Total Respondents	16(100.0)	81(100.0)	44(100.0)	72(100.0)	213(100.0)
USAREUR					
Not Used	14(50.0)	27(44.3)	22(75.9)	23(3.2)	86(47.8)
Assess for Initial Training	9(32.1)	14(23.0)	2(6.9)	22(35.5)	47(26.1)
Assess for Refresher Training	7(25.0)	15(24.6)	4(13.8)	12(19.4)	38(21.1)
Proficiency Exams	4(14.3)	4(6.6)	3(10.3)	10(16.1)	21(11.7)
Assess for Unit Readiness	2(7.1)	9(14.8)	1(3.4)	6(9.7)	18(10.0)
Other	0(0.0)	6(9.8)	2(6.9)	1(1.6)	9(5.0)
Total Respondents	28(100.0)	61(100.0)	29(100.0)	62(100.0)	180(100.0)
CONUS-RC					
Not Used	7(70.0)	6(37.5)	15(26.3)	13(28.9)	41(32.0)
Assess for Initial Training	3(30.0)	10(62.5)	19(33.3)	20(44.4)	52(40.6)
Assess for Refresher Training	2(20.0)	4(25.0)	24(53.3)	22(48.6)	52(40.6)
Proficiency Exams	0(0.0)	3(18.8)	7(12.3)	7(15.6)	17(13.3)
Assess for Unit Readiness	0(0.0)	2(12.5)	11(19.3)	8(17.8)	21(16.4)
Other	1(10.0)	0(0.0)	5(8.8)	3(6.7)	9(7.0)
Total Respondents	10(100.0)	16(100.0)	57(100.0)	45(100.0)	128(100.0)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 87.

Table 47. Unit Trainer Reports of Ways in which LAI Pretests are Used by Combat Arm and Subsample

Ways LAI Pretests are Used	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
Total					
Assess for Initial Training	29(53.7)	71(44.9)	58(44.6)	60(33.5)	218(41.8)
Assess for Refresher Training	20(37.0)	39(24.7)	37(28.5)	62(34.6)	158(30.3)
Proficiency Exams	13(24.1)	35(22.2)	38(29.2)	54(30.2)	149(30.2)
Assess for Unit Readiness	5(9.3)	18(11.4)	14(10.8)	32(17.9)	69(13.2)
Other	1(1.9)	15(9.5)	10(7.7)	11(6.1)	37(7.1)
Total	54(100.0)	158(100.0)	130(100.0)	179(100.0)	521(100.0)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 87.

Table 48. TEC User and Unit Trainer Opinions on the Usefulness of LAI Pretests by Combat Arm and Subsample

Are Pretests Useful?	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Users					
Yes	43(50.6)[a]	119(52.4)	73(47.4)	129(66.2)	364(55.0)
No	12(14.1)	33(14.5)	18(11.7)	21(10.8)	84(12.7)
Don't Know	30(35.3)	75(33.0)	63(40.9)	45(23.1)	213(32.2)
Trainers					
Yes	10(66.7)	34(43.0)	25(55.4)	49(67.1)	118(55.4)
No	0(0.0)	8(10.1)	1(2.2)	2(2.7)	11(5.2)
Don't Know	5(33.3)	37(46.8)	20(43.5)	22(30.1)	84(39.4)
USAREUR					
Users					
Yes	28(56.0)	73(50.3)	22(36.7)	93(61.2)	216(53.1)
No	8(16.0)	22(15.2)	6(10.0)	9(5.9)	45(11.1)
Don't Know	14(28.0)	50(34.5)	32(53.3)	50(32.9)	146(35.9)
Trainers					
Yes	14(53.8)	25(41.7)	4(14.8)	38(64.4)	81(47.1)
No	1(3.8)	6(10.0)	0(0.0)	3(5.1)	10(5.8)
Don't Know	11(42.3)	29(48.3)	23(85.2)	18(30.5)	81(47.1)
CONUS-RC					
Users					
Yes	11(64.7)	44(52.4)	122(55.5)	114(56.2)	291(55.5)
No	1(5.9)	11(13.1)	29(13.2)	17(8.4)	58(11.1)
Don't Know	5(29.4)	29(34.5)	69(31.4)	72(35.5)	175(33.4)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: User, 105; Unit, 91.

Table 48. TEC User and Unit Trainer Opinions on the Usefulness of LAI Pretests by Combat Arm and Subsample

Are Pretests Useful?	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-RC					
Trainers					
Yes	3(30.0)	11(68.8)	37(57.8)	29(70.7)	80(60.6)
No	0(0.0)	0(0.0)	3(4.7	0(0.0)	3(2.3)
Don't Know	7(70.0)	5(31.3)	24(37.5)	12(29.3)	48(37.1)
TOTAL					
Users					
Yes	82(53.9)	236(51.8)	217(50.0)	336(61.1)	871(54.7)
No	21(13.8)	66(14.5)	53(12.2)	47(8.5)	187(11.7)
Don't Know	49(32.2)	154(33.8)	164(37.8)	167(30.4)	534(33.5)
Trainers					
Yes	27(52.9)	70(45.2)	66(48.2)	116(67.1)	279(54.0)
No	1(2.0)	14(9.0)	4(2.9)	5(2.9)	24(4.6)
Don't Know	23(45.1)	71(45.8)	67(48.9)	52(30.1)	213(41.2)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: User, 105; Unit, 91.

DISTRIBUTION OF INFORMATION ABOUT TEC

A large majority of TEC users in each subsample (67.5 - 87.5%) indicated their Unit Trainers to be a source of information about TEC (Table 49). Other frequently indicated sources were the Soldier's Manual (20.3 - 28.1%), other soldiers (24.9 - 27.9%) and the TEC Learning Center (32.8-34.1%) (except among Reserve Component users where only 11.4% indicated this as a source).

Other sources of information about TEC listed by users were BCT/AIT (17), NCO Course (38), Unit Training (29) and Education Centers and similar facilities (10). Sixty-one (61) users also listed various company/battery or battalion personnel (e.g., S3, tank commander, squad leader) as sources and 13 remarked that they had sought TEC information on their own initiative.

Unit Trainers and Battalion Interviewees were questioned about both their introductions to TEC and how they were currently kept informed. (Due to an error in the questionnaire, only those trainers answering "yes" to Question 3a were asked to respond to the question regarding introductions.) Among Unit Trainers (Table 50), 26.4% had no introduction to TEC, 35.2% had read TEC literature, and 20.2% had seen the TEC lesson for Green Tabbers. Of those who listed other sources of introduction to TEC, 36 had found out about TEC from others in the company/battery or battalion. Also listed as sources were officer or NCO courses (20), training centers (12) and special classes/briefings on TEC (10). Irrespective of source 76.7% of all Trainers felt their introductions to TEC were satisfactory (Table 51).

Among Battalion Interviewees, 3 had been given no introduction to TEC, 2 had used TEC materials only, and 5 had used other sources only. Most (31 or 75.6%) had used both TEC and other sources. Of all 41 respondents, 23 (56.1%) had seen the lesson for Green Tabbers and 28 (68.3%) had read some TEC literature. Other sources of introduction listed included officer/NCO courses (7), training conferences (13), and Interviewees' precedessors and/or others in the battalion (10). Thirty-six (87.8%) of 41 respondents felt their introductions were satisfactory.

Most Battalion Interviewees (32, 76.2%) also felt their current information about TEC to be satisfactory. Only 6 (14.3%) found it unsatisfactory and 4 (9.5%) were unsure. Sources of information listed by them were: TEC information (bulletins, pamphlets, etc.)(34); Local Training and Audio-visual Support Centers (TASCs)(7); Combat Arm School publications (6); Army magazines and local publications (5); G - 3's, S - 3's (2), and SQT literature and the Soldier's Manual (1 each). Twenty-six of 36 (72.2%) respondents who were specifically asked also reported that they did receive current TEC Status Lists.

Those who desired more information (8) most often asked for a single comprehensive catalog of those TEC tapes in the field and more information on logistics such as ordering.

Table 49. TEC Users Sources of Information about TEC by Combat Arm and Subsample

Information Sources	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Unit Trainer	52(60.5)[a]	158(68.7)	102(68.9)	130(68.1)	442(67.5)
Soldier's Manual	17(19.8)	58(25.2)	28(18.9)	69(36.1)	172(26.3)
Other Soldier's	20(23.3)	73(31.7)	30(20.3)	58(30.4)	181(27.6)
Post News	3(3.5)	18(7.8)	6(4.1)	14(7.3)	41(6.3)
Learning Center	33(38.4)	71(30.9)	36(24.3)	75(39.3)	215(32.8)
Posters	7(8.1)	36(15.7)	17(11.5)	30(15.7)	90(13.7)
Other	15(17.4)	34(14.9)	21(14.2)	29(15.2)	99(15.1)
USAREUR					
Unit Trainer	27(57.4)	115(79.9)	38(63.3)	102(66.2)	282(69.6)
Soldier's Manual	21(44.7)	43(29.9)	15(25.0)	35(22.7)	114(28.1)
Other Soldier's	10(21.3)	38(26.4)	21(35.0)	44(28.6)	113(27.9)
Post News	1(2.1)	4(2.8)	5(8.3)	4(2.6)	14(3.5)
Learning Center	9(19.1)	37(25.7)	31(51.7)	61(39.6)	138(34.1)
Posters	2(4.3)	15(10.4)	8(13.3)	18(11.7)	43(10.6)
Other	9(19.1)	23(16.0)	9(15.0)	19(12.3)	60(14.8)
CONUS-RC					
Unit Trainer	11(68.8)	73(89.0)	193(88.9)	176(86.7)	453(87.5)
Soldier's Manual	1(6.3)	10(12.2)	44(20.3)	50(24.6)	105(20.3)
Other Soldiers	4(25.0)	17(20.7)	61(28.1)	47(23.2)	129(24.9)
Post News	0(0.0)	2(2.4)	4(1.8)	8(3.9)	14(2.7)
Learning Center	2(12.5)	17(20.7)	16(12.0)	24(11.8)	59(11.4)
Posters	1(6.3)	5(6.1)	37(17.1)	32(15.8)	75(14.5)
Other	2(12.5)	5(6.1)	17(7.8)	12(5.9)	36(6.9)

[a] In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Total cases: CONUS-AC, 655; USAREUR, 405; CONUS-RC, 518. Cases missing: 74.

Table 50. Unit Trainer Introductions to TEC by Combat Arm and Subsample

Sources of Information	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
No Introduction	2(18.2)[a]	15(25.9)	5(16.1)	13(26.0)	35(23.3)
Green Tabber Lesson	1(9.1)	11(19.0)	2(6.5)	7(14.0)	21(14.0)
TEC Literature	3(27.3)	12(20.7)	14(45.2)	18(36.0)	47(31.3)
Total Respondents	11(100.0)	58(100.0)	31(100.0)	50(100.0)	150(100.0)
USAREUR					
No Introduction	4(28.6)	12(34.3)	5(25.0)	9(21.4)	30(27.0)
Green Tabber Lesson	6(42.9)	8(22.9)	2(10.0)	13(31.0)	29(26.1)
TEC Literature	8(57.1)	13(37.1)	2(10.0)	15(35.7)	38(34.2)
Total Respondent	14(100.0)	35(1-0.0)	20(100.0)	42(100.0)	111(100.0)
CONUS-RC					
No Introduction	0(0.0)	2(16.7)	19(40.4)	10(27.8)	31(30.1)
Green Tabber Lesson	2(25.0)	2(16.7)	13(27.7)	9(25.0)	26(25.2)
TEC Literature	2(25.0)	8(66.7)	16(34.0)	17(47.2)	43(41.7)
Total Respondents	8(100.0)	12(100.0)	47(100.0)	36(100.0)	103(100.0)
Total					
No Introduction	6(18.2)	29(27.6)	29(29.6)	32(22.5)	96(26.4)
Green Tabber Lesson	9(27.3)	21(20.0)	17(17.3)	29(20.4)	76(20.9)
TEC Literature	13(39.4)	33(31.4)	32(32.7)	50(35.2)	128(35.2)
Total Respondent	33(100.0)	105(100.0)	98(100.0)	142(100.0)	364(100.0)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 244.

Table 51. Unit Trainers Indicating Satisfactory Introductions to TEC by Combat Arm and Subsample

Subsample	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC	6(100.0)[a]	26(68.4)	14(70.0)	32(72.7)	78(72.2)
USAREUR	19(100.0)	32(76.2)	8(72.7)	32(82.1)	91(82.0)
CONUS-RC	2(66.7)	9(75.0)	31(73.8)	25(80.6)	67(76.1)
Total	27(96.1)	67(72.8)	53(72.6)	89(78.1)	236(76.7)

[a] In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Total responses: CONUS-AC, 108; USAREUR, 111; CONUS-RC, 88. Cases missing: 15.

No Battalion Interviewees complained of being uninformed of the arrival of new TEC lessons. Although most systems for distribution of information within the unit regarding new lesson arrivals were tailored to fit the unit, most Interviewees described similar systems whereby lessons were received by a designated individual, logged in, sent to the normal storage location, and periodic lists/updates were given to battalion and company/battery training staffs.

However, most Unit Trainers did not report that they were kept informed of new lesson arrivals (Table 52). Overall only 42.3% reported being informed. This may have been somewhat inflated by CONUS-RC responses since only 31.3% and 38.7%, respectively of CONUS-AC and USAREUR Trainers felt they were kept informed. The differences in these percentages and the 65.7% in CONUS-RC may lie in the fact that some National Guard units have pinpoint distribution of lessons to individual armories.

Those trainers who were informed listed the following sources of information about new lesson arrivals: S-3s, 21; training NCO's, 12; other unit personnel, 16; battalion chain of command, 42; Learning Centers, 10; and written distributions (flyers, DFs, etc.), 30.

DISTRIBUTION OF LESSONS AND EQUIPMENT

The primary purpose of the questions in this section was to determine whether each battalion had been able to obtain adequate TEC tapes and equipment for effective TEC use.

Just over half (23) of the Battalion Interviewees felt that they had all available lessons of interest to the battalion. Ten (10) felt that they did not and 9 were not sure. Six (6) men felt they needed a summary or topic list of lessons. Some apparently felt unable to determine from the TEC Status Lists in their current format whether or not a lesson could be obtained at a given time.

Other difficulties mentioned were receipt of lessons unneeded and inappropriate for the unit, confusion caused by receipt of lesson series out of sequence (e.g., Part 3 before Part 2), and a need for more lessons for higher skill levels.

Although many Interviewees expressed an interest in lessons for additional topics, specific topics were mentioned only by Artillery interviewees. These were: Redeye, Vulcan-Chapparal, Radar, Survey Tactics and M880 TAC Vehicle.

Only 13 Interviewees (of 30 asked) had attempted to order TEC lessons. Some qualified this as an infrequent occurrence. Some who had not ordered, however, had tried unsuccessfully or been told that they could not. Those who had ordered had done so through TASC, Combat Arm Schools, the Army

Table 52. Number of Unit Trainers Kept Informed of the Arrival of New TEC Lessons

Subsample	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC	10(58.8)[a]	20(21.5)	19(37.3)	26(26.8)	75(31.3)
USAREUR	16(55.2)	23(34.8)	15(44.1)	21(32.3)	75(38.7)
CONUS-RC	5(38.5)	11(68.8)	48(71.6)	30(63.8)	94(65.7)
Total	31(52.5)	54(30.9)	82(53.9)	77(40.3)	244(42.3)

[a]Tabled numbers represent only those respondents who stated that they were kept informed of new lesson arrivals. In parentheses, beside each reported number, is shown the percentage of all responses for that combat arm and subsample that the number represents.

Training Support Center (ATSC), or Tobyhanna Army Depot. In general, no clear or consistent picture emerged of the need for ordering lessons or the process for doing so.

Only 4 of 42 interviewees indicated having had problems in receipt of TEC materials or equipment from Tobyhanna. These were order delays or non-response and occasional damage. No one indicated having had a frequent or continuing problem. Several Interviewees again mentioned receipt of unneeded/unrequested lessons and receipt of lesson series out of sequence. One stated a need for procedural guidance in disposing of worn or damaged lessons and equipment.

The next area of questioning concerned the adequacy of bases of issue. Twenty-eight (66.7%) battalions had six or more CUE-SEES on hand, but only 17 (40.5%) had all eight according to Interviewees' knowledge. Six (6) Interviewees did not know how many CUE-SEES were on hand. Of those having fewer than 8, most said extra machines were in maintenance or on loan.

When asked if the 8 CUE-SEES per battalion basis for issue was adequate, 23 (54.8%) Interviewees said "yes" and 19 (45.2%) said "no". Of those Active Component Interviewees who felt more machines were needed, responses were often given on a machine per company basis. Numbers of 1 (4), 2 (2), 3 (4), 4 (3) and 5 (1) machines per company and 1 per platoon (1) were suggested. Some also felt 1 to 4 additional machines were needed for float or signout. These yielded figures of 8-20 CUE-SEE per battalion. Reasons for need centered around various types of training, e.g., small groups, simultaneous training of variously sized groups.

Reserve Component Interviewees most often desired 2 CUE-SEES per location (armory) plus 1 or 2 extras for headquarters and signout. Also suggested were 1 and 4 CUE-SEES per location with extras. Needs suggested by some of those commenting yielded figures only slightly larger (1-2 machines) than current bases of issue.

Most Interviewees (26, 61.9%) felt that the basis of issue for TEC lessons was adequate. Of those (16) who felt it was not adequate, desired numbers of copies were: 1 per co/btry (5); 2 per co/btry (4); 3 per battalion (4); 5 per battalion (1). Reasons cited were again for use in small group (crew) training and simultaneous company/battery training. Irrespective of their opinions on general lesson BOI adequacy, 10 Interviewees felt that more copies of lessons were needed for specific topics only.

Twenty-eight of 42 Interviewees (66.7%) felt that the BOI for headsets was adequate. Numbers desired per machine by others were, 2(4), 4(1) and 2-5(1). Reasons for need were tank crew and squad training and some noise problems with small group use.

LESSON AND EQUIPMENT PROBLEMS

It should be noted that data on lesson/equipment problems is from only those in each sample who indicated that they actually used the equipment. Among TEC Users, 1023 (65.7%) had used the CUE-SEE by themselves (CUE-SEE Users'). Among unit trainers, 326 (63.7%) had used the CUE-SEE projector (Projector Users) with groups of soldiers (as determined from analysis of results of Unit Question 3a). These groups were the respondents for equipment questions.

Errors in the content of TEC lessons did not appear to be a significant problem. Mean frequency of failure reported by TEC Users (1.89) and Projector Users (1.61) in Table 53 fall between scale points 1, "Never a problem" and 2, "Only once or twice".

Battalion Interviewees were questioned about lesson problems in a more open-ended fashion. Their responses were as follows: Nineteen (19 or 45.1%) stated no problems and only 2 noted inaccuracies (UCMJ, Law 292 lessons). The most frequent (9) complaints were that some lessons were out of date or conflicted with other sources of information such as manuals. Lessons cited were: FDC, Call for Fire, FAAR and TADDS. Other complaints were that needed areas were not covered (4), unneeded areas were covered (3) or that lessons were boring (2) or too lengthy (1).

Interviewees generally agreed (38 or 90.5%) that lesson tapes and film cartridges did not fail frequently enough to hinder effective TEC use in the battalion. Most Interviewees (27 or 64.3%) also agreed that CUE-SEES do not fail frequently enough to hinder effective TEC use. Fourteen (14) Interviewees (33.3%) felt that CUE-SEES do fail too frequently.

The following problems were listed as major sources of difficulty with the CUE-SEE by Interviewees: Video advance and synchronization (8), projector mirror, fuses, film rewind, and power latch (1 each).

CUE-SEE Users and Projector Users were also questioned about lesson and equipment difficulties. Responses for Projector Uses are reported in Table 54. Only 12.0% reported CUE-SEE failure and only 9.8% reported lesson failure to occur frequently enough to hinder effective TEC Use in the Unit.

Responses differed by combat arm only with regard to lesson failure and only in the CONUS-RC subsample ($\chi^2 = 40.96$, df = 20, $p < .004$). Specific problems listed by Projector Users were: Sound and picture misaligned (7); failure of film to feed (4); sound failure, projector failure, sudden stops, and tape breakage due to machine (3 each). Also mentioned were faulty advance (4); bad focus (2); loss of bulbs (2); and poor frame adjustment (1). Most appeared unclear whether the machine or tape/filmstrip was at fault in cases resulting in such things as tape breakage.

Table 53. TEC User and Unit Trainer Reports of Errors in TEC Lessons by Combat Arm and Subsample

Subsample	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Users	1.66(83)[a]	1.97(230)	2.03(151)	1.91(197)	1.93(661)
Trainers	1.47(19)	1.63(95)	1.67(54)	1.59(85)	1.61(253)
USAREUR					
Users	2.08(50)	2.03(143)	1.98(59)	1.81(151)	1.95(403)
Trainers	2.07(30)	1.87(68)	1.19(37)	1.82(66)	1.76(201)
CONUS-RC					
Users	1.81(16)	1.95(82)	1.78(218)	1.75(202)	1.80(518)
Trainers	1.21(14)	1.82(17)	1.24(74)	1.62(47)	1.42(152)
TOTAL					
Users	1.82(149)	1.98(455)	1.90(428)	1.83(550)	1.89(1582)
Trainers	1.70(63)	1.74(180)	1.37(165)	1.67(198)	1.61(606)

Note. Response scale is as follows: 1-Never; 2-Once or twice; 3-Sometimes, not often; 4-most of the time.

[a]Number of respondents in parentheses.

Table 54. Unit Trainers Reporting Equipment Failure to Hinder Effective Use by Combat Arm and Subsample

Subsample	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
CUE/SEE Failure	0(0.0)[a]	6(15.0)	1(5.0)	3(6.5)	10(8.8)
Lesson Failure	0(0.0)	4(10.0)	1(5.0)	8(17.4)	13(11.5)
USAREUR					
CUE/SEE	5(27.8)	7(16.3)	2(18.2)	7(16.7)	21(18.4)
Lesson Failure	5(26.3)	7(16.7)	0(0.0)	2(4.8)	14(12.3)
CONUS-RC					
CUE/SEE Failure	0(0.0)	0(0.0)	6(14.3)	1(3.0)	7(7.8)
Lesson Failure	0(0.0)	0(0.0)	3(7.1)	1(3.0)	4(4.5)
Total					
CUE/SEE Failure	5(17.9)	13(13.7)	9(12.3)	11(1.1)	38(12.0)
Lesson Failure	5(17.9)	11(11.8)	4(5.5)	11(9.1)	31(9.8)

[a] In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents. Total responses: Cue-See, 317; TEC Lesson, 315.

TEC Users were asked to report the frequency of CUE-SEE breakdown during use on a 4-point scale. The average response, shown in Table 55, (1.69) fell between scale points 1, "Never a problem," and 2, "Only or twice;" showing a very low rate of breakdown.

Informal preliminary questioning of individuals knowledgeable about CUE-SEE use had resulted in the conclusion that the most frequently occurring problem might be the necessity to realign tapes and filmstrips which were out of synchronization and the need to "back-up" or review a previous slide. Therefore, those CUE-SEE users were asked how often the "sound track gets out of step with the picture" and whether or not they were able to correct this problem themselves.

CUE-SEE User reports of synchronization problems (Table 56) did not bear out initial concerns. The mean response for the total sample was 2.04 on a 4-point response scale. Scale point 2 reflected an occurrence of "Only once or twice". In addition, 685 (67.4%) respondents said they could adjust the machine back to correct synchronization. These included 68.4% of the CONUS-AC subsample, 72.6% of the USAREUR subsample and 61.9% of the CONUS-RC Subsample.

Users also reported an infrequent need to "back-up" and review a frame. Responses to the question of how often this need occurred (Table 57) showed the mean response for the sample to be 2.43. This value fell between scale responses 2, "Once or twice;" and 3, "Sometimes".

All Unit Trainers were asked to report whether or not they felt soldiers had problems using the CUE-SEE and the types of problems noticed. Few soldier problems with the CUE-SEE were reported (Table 58). Only 11.6% of those sampled felt soldiers did have problems, 64.4% felt soldiers had no problems and 4.0% did not know.

Those trainers who did feel that soldiers had problems with the CUE-SEE named the following: lack of familiarity with machine/controls, 10; machine, malfunctions, 10; alignment and focus problems, 9; and fragility of machine 2. Also mentioned were need to back up, poorly marked controls, a need for automatic film restarts and too lengthy lessons.

In response to questioning regarding their own use of the CUE-SEE projector with groups of soldiers, Projector Users agreed with several named restrictions on projector use (Table 59). Among Active Component respondents, almost half (44.8 and 47.0%) felt restricted by the projected image being too small. However, only 10% of Reserve Component users found this to be a problem. Between 16.1 and 27.7% of each subsample found image quality to be poor and 20.7 - 28.9% found sound to be inadequate.

Of 31 additional restrictions listed by Projector Users, 9 restated difficulties with image size and quality. Other restrictions listed were mechanical problems (2); lack of synchronization (3); film breakage (2); need to back up (2); and picture out of frame (1). Seven (7) respondents had difficulty with controls. Three (3) felt a pre-set timing option or

Table 55. Average Frequency of CUE-SEE Breakdown during Soldier Use by Combat Arm and Subsample

Subsample	Combat Arm				
	ADA	Armor	Artillery	Infantry	Other
CONUS-AC	1.58(55)[a]	1.60(143)	1.74(89)	1.55(144)	1.61(431)
USAREUR	1.89(28)	1.75(100)	1.87(38)	1.69(97)	1.76(263)
CONUS-RC	1.57(7)	2.00(42)	1.74(158)	1.66(117)	1.74(324)
TOTAL	1.68(90)	1.71(285)	1.76(285)	1.62(358)	1.69(1018)

Note. Response scale is as follows: 1-Never a problem; 2-Once or twice; 3-Sometimes, not often; 4-Most of the time.

[a]Number of respondents in parentheses.

Table 56. Average Frequency of Synchronization Problems Experienced by CUE-SEE Users by Combat Arm and Subsample

Subsample	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC	2.00(56)[a]	1.98(144)	2.10(89)	2.08(144)	2.04(431)
USAREUR	2.14(28)	2.04(101)	1.92(38)	1.94(97)	2.00(262)
CONUS-RC	1.99(7)	2.52(42)	2.09(159)	1.97(118)	2.09(324)
Total	1.99(91)	2.08(285)	2.07(285)	2.01(356)	2.04(1017)

Note. Response scale is as follows: 1-Never a problem; 2-Once or twice; 3-Sometimes, not often; 4-Most of the time.

[a] Number of respondents in parentheses.

Table 57. Average Frequency of CUE-SEE users Need to Back-up a TEC Lesson by Combat Arm and Subsample

Subsample	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC	2.29(55)[a]	244(143)	2.70(86)	2.29(144)	2.42(428)
USAREUR	2.54(28)	2.53(100)	2.29(38)	2.24(97)	2.39(263)
CONUS-RC	2.33(6)	2.59(41)	2.50(159)	2.33(116)	2.45(322)
TOTAL	2.37(89)	2.49(284)	2.53(283)	2.29(357)	2.43(1013)

Note. Response scale is as follows: 1-Never a problem; 2-Once or twice; 3-Sometimes, not often; 4-Most of the time.

[a]Number of respondents in parentheses.

Table 58. Unit Trainer Reports of Soldier Trouble Operating CUE-SEE by Combat Arm and Subsample

Do Soldiers Have Trouble with Cue/See?	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Yes	2(11.8)[a]	7(7.5)	7(13.7)	7(8.5)	23(9.4)
No	11(64.7)	54(58.1)	30(58.8)	54(65.9)	149(61.1)
Don't Know	4(23.5)	32(34.4)	14(27.5)	21(25.6)	72(29.5)
Total	17(100.0)	93(100.0)	51(100.0)	82(100.0)	244(100.0)
USAREUR					
Yes	5(16.7)	13(19.1)	2(5.6)	8(12.1)	28(14.0)
No	21(70.0)	43(63.2)	17(47.2)	50(75.8)	131(65.5)
Don't Know	4(13.3)	12(17.6)	17(47.2)	8(12.1)	41(20.5)
Total	30(100.0)	68(100.0)	36(100.0)	66(100.0)	200(100.0)
CONUS-RC					
Yes	1(7.1)	1(5.9)	12(16.2)	4(8.5)	18(11.8)
No	8(57.1)	14(82.4)	47(63.5)	35(74.5)	104(68.4)
Don't Know	5(35.7)	2(11.8)	15(20.3)	8(17.0)	30(19.7)
Total	14(100.0)	17(100.0)	74(100.0)	47(100.0)	152(100.0)
Total					
Yes	8(13.1)	21(11.8)	21(13.0)	19(9.7)	69(11.6)
No	40(65.6)	111(62.4)	94(58.4)	139(71.3)	384(64.4)
Don't Know	13(21.3)	46(25.8)	46(28.6)	37(19.0)	143(24.0)
Total	61(100.0)	178(100.0)	161(100.0)	195(100.0)	596(100.0)

[a] In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents.
Cases missing: 12.

Table 59. Unit Trainer Reports of Restrictions on CUE-SEE Projectors by Combat Arm and Subsample

Problems	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Image Quality Poor	1(20.0)[a]	3(7.9)	2(14.3)	8(26.7)	14(16.1)
Image Too Small	2(40.0)	16(42.1)	6(42.9)	15(50.0)	39(44.8)
Sound Inadequate	1(20.0)	9(23.7)	3(1.0)	5(16.7)	18(20.7)
Total Respondents	5(100.0)	38(100.0)	14(100.0)	30(100.0)	87(100.0)
USAREUR					
Image Quality Poor	4(30.8)	7(26.9)	2(20.0)	10(29.4)	23(27.7)
Image Too Small	8(61.5)	11(42.3)	1(10.0)	19(55.9)	39(47.0)
Sound Inadequate	3(1 6)	12(46.2)	1(10.0)	8(23.5)	24(28.9)
Total Respondents	13(100.0)	26(100.0)	10(100.0)	34(100.0)	83(100.0)
CONUS-RC					
Image Quality Poor	1(25.0)	2(28.6)	6(30.0)	4(21.1)	13(26.0)
Image Too Small	0 (0.0)	4(57.1)	5(20.0)	11(57.9)	20(10.0)
Sound Inadequate	1(25.0)	1(14.3)	8(40.0)	3(15.8)	13(24.0)
Total Respondents	4(100.0)	7(100.0)	20(100.0)	19(100.0)	50(100.0)

[a]In parentheses, beside each reported number of responses, is shown the percentage of all responses for that combat arm and subsample that the number represents.

remote control was needed to overcome awkwardness in operating the proceed button. Others felt controls were too complicated or poorly marked.

MAINTENANCE

The designated maintenance facility for all CONUS-AC battalions was the installation Training and Audio-Visual Support Center (TASC). CONUS-RC units handled repairs either through the state maintenance shops or the TASC of a nearby Army installation. For some, defective lessons were handled through one facility and equipment through another.

USAREUR battalions were typically assigned to the nearest geographically located TASC. However, equipment repairs were all centralized under the control of Training Support Activity Europe (TSAE). For both USAREUR and CONUS-RC units equipment repair facilities were located some distance away (distances ranged from approximately 10-100 miles).

Frequencies of Interviewees reporting no difficulties in transporting equipment to and from repair facilities were: CONUS-AC, 14 (77.8%); USAREUR, 5 (41.7%); and CONUS-RC, 9 (75.0%). Problems in USAREUR primarily involved the necessity of obtaining vehicles and time involved for drivers. In order to alleviate these problems, TSAE had recently instituted a periodic pick-up and delivery system. However, this system had not been in operation long enough for its effects to be evaluated by Interviewees.

Just over half (55.5%) of CONUS-AC respondents indicated that they were able to direct exchange (DX) malfunctioning CUE-SEES. Some (22.2%) said they could not DX and 22.2% did not know. Among USAREUR respondents, only 25.0% indicated being able to DX CUE-SEEs, 58.3% said they could not and 16.7% did not know. Five (41.7%) CONUS-RC Interviewees could DX, 33.3% could not and25.0% did not know.

Interviewees were also asked if they could DX broken tapes/filmstrips. Those who could included 83.3% in CONUS-AC, 33.3% in USAREUR, and 66.7% in CONUS-RC. Only one person interviewed per subsample said that this could not be done and remaining respondents did not know. A number of Interviewees stated that they had either never had this problem or automatically ordered a new tape without attempting to DX the old one.

Almost all (91.7%) of CONUS-RC Interviewees reported no problems with repair, e.g., incorrectly repaired equipment. Half (50%) the CONUS-AC and USAREUR Interviewees also reported no problems. Most USAREUR Interviewees reporting problems complained of excessive delays (1-6 months) in equipment return. Many CONUS-AC respondents (55.6%) who failed to give a positive response simply did not know whether there had been repair problems or not.

It should be mentioned that the interviewer discovered that there had been a USAREUR-wide problem in setting up a feasible repair system for TEC equipment. This had resulted in the generally higher rate of complaints among Interviewees in this subsample. Plans have been made by the TSAE and actions are already underway to correct this problem. Therefore, responses in this report may not accurately reflect the status of TEC maintenance in USAREUR in the near future.

Interviewees were also asked for suggestions on improving the existing maintenance system. Suggestions were as follows: Have regularly scheduled check-up and repair. (4); Give units spare bulbs. (3); Train a man within the battalion to do minor repairs. (3); Develop an adequate field power source; Distribute a maintenance checksheet; Distribute spare fuses; and Make tape splicing equipment available. (1 each).

BATTALION TEC MANAGEMENT

The purpose of the questions in this section was to determine the nature and adequacy of various methods of managing TEC equipment and materials used by the battalions. Thirty-three (33) Interviewees were asked where the Beseler CUE-SEEs were kept. Of these 8 (24.2%) stated that machines were in the Battalion Learning Center (BLC); 5 (15.2%) said at Battalion Headquarters (S - 3 shop, training room), 13 (39.4%) said each company/battery had one machine and the rest were at headquarters; and 4 (12.1%) said all machines were at the companies/batteries. All respondents except one who were asked where TEC lessons were kept answered that they were at battalion level (BLC, library, S - 3, HQ). This one was a USAREUR unit which was part of a unique arrangement involving a Concern (Kaserne) Education Center.

Only 13 (31%) Interviewees felt that storage was inadequate for TEC materials. The only specifically expressed storage needs were for shelving or cabinets for tapes and "gray books" for LAIs. Two Interviewees also expressed concern over future storage given the continuing increase in volume of material.

Only 6 (2.1%) Interviewees indicated that theft of TEC equipment had occurred. Items missing included headsets, tape cassettes and extension cords. Others did not know or did not consider theft to be a problem.

Only about half (47.6%) of Interviewees stated that records of TEC use were kept in the battalion. Records were generally kept by means of hand receipt or log book. Some interviewees apparently considered a sign-out or hand receipt procedure to be a "record keeping" of TEC usage and others did not. When asked specifically if the battalion had a signout procedure. 83.3% responded affirmatively.

Many Interviewees did not know exactly what information was recorded. Most were sure that basic information; date, equipment or lesson identification, and signature or name, was included. Several stated that time, company/battery, and number of users were also recorded. One mentioned recording purpose of use.

With regard to signout procedures, Interviewees were asked who could sign out equipment and lessons and for how long. In response to who could sign, the most frequent response (10) was anyone. However, some battalions allowed only instructors (2), NCOs (3), or representatives for companies/batteries (7) to check out TEC equipment. Most had no formal limit on the length of time equipment could be kept out. Many indicated that this had never been a problem or that most signouts were for weekend or overnight use. Others required returns based on need and signouts based on need priority.

LOCATIONS OF USE

Although most Battalion Interviewees indicated that there was a permanent location for TEC use available to the soldiers in their units, the nature of these locations varied widely. For some, these were fixed locations (e.g., day room) for at least one Beseler set up at the individual companies/batteries or National Guard Armories. Others had Battalion Learning Centers in classrooms with carrels or partitions for individual use. A number of Active Component units had access to TEC materials located in a brigade, division, or installation level facility (e.g., MOS Library, Education Center).

In all, 22 Interviewees stated that at least one TEC location was available to troops and 18 noted that 2 or more locations were available. Among the 22 naming only one available location, 12 stated that TEC was made available at this location during duty hours only. Three (3) Interviewees listed hours of operation as duty plus weekday evenings (e.g., until 2000, 2100). Others stated that TEC was available to the individual user anytime (2); not at all (5), or did not know (2). Five (5) Interviewees stated that there had been complaints or requests to have the center open at night and/or on weekends. Six (6) stated that there had been no complaints and others did not know or did not comment.

Among the 18 Interviewees who listed two or more centers as available to soldiers, 9 stated that at least one center was open weekdays during duty and evening hours. Other hours of operation listed (for the center most often open) were: weekday duty hours (3), 24 hours per day on weekdays (4), and daytime and evening 7 days per week. Among "multiple center" Interviewees, 6 stated that there had been no requests for additional hours of operation and 1 stated there had been some requests for weekend operation. Among all interviewees 7 stated that TEC equipment was available on signout for times other than regular hours of operation.

Interviewees were also asked whether there was a permanent staff at locations of use and whether there were any staffing problems. With regard to battalion level TEC facilities, only 1 indicated a permanent staff. Others (15) said that there was no staff or that the staff could not be considered permanent (13) since there was no officially designated slot. Several Interviewees indicated the desire or need for such a slot and some dissatisfaction with the loss of manpower available for other duties required by the assignment of an individual to temporary or additional TEC duties. This appeared to have been the primary staffing "problem." Most Interviewees knew little about staffing arrangements at higher level or other facilities.

TEC users were asked if the study areas set up for TEC use were difficult to study in. Overall, only 20% of CONUS-AC users, 18.4% of USAREUR Users, and 14% of CONUS-RC Users said "yes". Most (CONUS-AC, 67.1%; USAREUR, 71.2%; CONUS-RC, 78.1%) said "no" and others did not know.

Users were further asked to indicate the reasons for difficulty of study at these locations by checking all those that applied from a list of reasons provided (User Question 13b). Responses, summarized in Table 60, showed lower percentages of respondents listing complaints in CONUS-AC than in USAREUR OR CONUS-RC. There was also a tendency for greater numbers of respondents to list noise, crowding and temperature problems as difficulties than size or lighting.

Additional difficulties mentioned by respondents included the following: lack of equipment or lessons, 14; center closed or being used for other purposes when needed, 10; and no area devoted exclusively to TEC use, 7. Most comments (11) having to do with the physical layout of the TEC location were general ones lack of privacy.

With regard to locations of use, Unit Trainers were asked only whether they felt the lesson catalog system to be adequate in those locations. Results, Table 61, showed that almost half (40.9% - 55.9%) of all respondents felt that the system was adequate. Many respondents (31.7% - 43.5%) did not know, but few (12.4% - 16.0%) felt the system was inadequate.

In addition to permanent locations set up for TEC use, TEC is sometimes used temporarily in other locations due to necessity or convenience of the users. Battalion Interviewees were questioned about the types of temporary use locations and any problems involved with the use of TEC in these areas.

Only 7 (16.7%) Interviewees indicated that TEC was not used in any temporary location. Fifteen (35.7%) Interviewees indicated that TEC was used on ranges or "in the field." Most (22 or 73.3%) of the Active Component Interviewees indicated that TEC was used in company/battery areas. Other locations listed were classrooms, "hard billets" during field exercises, "summer camp" for the Reserve Component, and mobile learning centers.

Table 60. TEC User Reports of Reasons for Difficulty of Study in TEC Locations by Combat Arm and Subsample

Reasons for Difficulty	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Too Noisy	8(10.1)[a]	31(13.7)	19(13.2)	39(20.2)	97(15.1)
Too Crowded	3(3.8)	32(14.2)	18(12.5)	28(14.5)	81(12.6)
Poorly Lighted	1(1.3)	17(7.5)	7(4.9)	5(2.5)	30(4.7)
Too Small	2(2.5)	23(10.2)	7(4.9)	17(8.8)	49(7.6)
Too Hot/Cold	3(3.8)	21(9.3)	16(11.1)	13(6.7)	53(8.3)
Total Respondents	79(100.0)	226(100.0)	144(100.0)	193(100.0)	642(100.0)
USAREUR					
Too Noisy	4(44.4)	14(50.00)	4(44.4)	18(56.3)	40(51.2)
Too Crowded	2(22.2)	15(53.6)	2(22.2)	19(59.4)	38(48.7)
Poorly Lighted	5(55.6)	7(25.0)	3(33.3)	12(37.5)	27(34.6)
Too Small	4(44.4)	8(14.3)	3(33.3)	12(37.5)	27(34.6)
Too Hot/Cold	7(77.8)	14(50.00)	1(11.1)	11(34.4)	33(42.3)
Total Respondents	9(100.0)	28(100.0)	9(100.0)	32(100.0)	78(100.0)
CONUS-RC					
Too Noisy	2(66.7)	7(43.8)	19(61.3)	20(48.8)	48(52.7)
Too Crowded	1(33.3)	10(62.5)	10(32.3)	19(46.3)	40(44.0)
Poorly Lighted	0(0.0)	5(31.3)	13(41.9)	7(17.1)	25(27.5)
Too Small	0(0.0)	4(25.0)	7(22.6)	5(12.2)	16(17.6)
Too Hot/Cold	0(0.0)	6(37.5)	14(45.2)	21(51.2)	41(45.1)
Total Respondents	3(100.0)	16(100.0)	31(100.0)	41(100.0)	91(100.0)

[a] Numbers in parentheses indicate percentage of total respondent in Combat Arm and Subsample represented by cell total. Cases missing: 1322.

Table 60. TEC USER Reports of Reasons for Difficulty of Study in TEC Locations by Combat Arm and Subsample

Reasons for Difficulty	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
TOTAL					
Too Noisy	14(15.4)	52(19.3)	42(22.8)	77(28.9)	185(22.8)
Too Crowded	6(6.6)	57(21.1)	30(16.3)	66(24.8)	159(19.6)
Poorly Lighted	6(6.6)	29(10.7)	23(12.5)	24(9.0)	82(10.1)
Too Small	6(6.6)	35(13.0)	17(9.2)	34(12.8)	92(11.3)
Too Hot/Cold	10(11.0)	41(15.2)	31(16.8)	45(16.9)	127(15.7)
Total Respondents	91(100.0)	270(100.0)	184(100.0)	266(100.0)	811(100.0)

[a]Numbers in parentheses indicate percentage of total respondent in Combat Arm and Subsample represented by cell total. Cases missing: 1322.

Table 61. Unit Trainer Reports of Lesson Catalog System Adequacy by Combat Arm and Subsample

Catalog System Adequate?	Combat Arm				
	ADA	Armor	Artillery	Infantry	Total
CONUS-AC					
Yes	9(52.9) [a]	30(32.3)	21(42.0)	37(48.1)	97(40.9)
No	1(5.9)	13(14.0)	10(20.0)	13(16.9)	37(15.6)
Not Sure	7(41.2)	50(53.8)	19(38.0)	27(35.1)	103(43.5)
Total	17	93	50	77	237
USAREUR					
Yes	16(55.2)	32(47.8)	8(24.2)	26(40.0)	82(42.3)
No	7(24.1)	9(13.4)	5(15.2)	10(15.4)	31(16.0)
Not Sure	6(20.7)	26(38.8)	20(60.6)	29(44.6)	81(41.8)
Total	29	67	33	65	194
CONUS-RC					
Yes	5(35.7)	13(76.5)	35(52.2)	28(59.6)	81(55.9)
No	2(14.3)	1(5.9)	9(13.4)	6(12.8)	18(12.4)
Not Sure	7(50.0)	3(17.6)	23(34.3)	13(27.7)	46(31.7)
Total	14	17	67	47	145

[a] In parentheses, beside each reported number of responses is shown the percentage of all responses for that combat arm and subsample that the number represents. Cases missing: 28.

Those Interviewees who had had or knew of experiences with TEC use outside permanent or semi-permanent buildings were asked what problems, if any, had occurred while using TEC equipment in this manner. Of 20 who had experienced field use, 11 stated that no problems had occurred. The most frequent problem named (5 times) was with generator malfunction. (It might be noted that several other Interviewees mentioned that TEC had not been used in the field due to lack of a generator.) Other problems were dirt, inability to set up a proper area, and insufficient brightness of the picture for tent or outside showing.

GENERAL COMMENTS - BATTALION INTERVIEWEES

With regard to individual TEC use, some initial Battalion Interviewees were asked whether the unit's location or distribution of TEC lessons or equipment caused any problems which restricted the soldiers' ability to study TEC. Of 13 who responded to this question 9 (69.2%) felt that such restrictions did exist. Restrictions named were: no learning center, no cubicles, tapes and machines at different locations, no provisions for signout, centers closed after duty hours, and red tape involved in signout.

Interviewees contacted subsequent to revision of the interview forms were asked whether time, distance and or procedures involved in obtaining a TEC lesson would discourage a soldier from doing so. Of 23 Interviewees responding to this question (on a scale of 1 to 5, "definitely yes" - "definitely not"), 18 (78.3%) said "definitely not." Among Active Component respondents, all but one felt that the soldier would go to the battalion to obtain TEC lesson. Reserve Component respondents stated that lessons could be obtained by soldiers in several ways. For example, some battalion level centers were open on weeknights, armories provided for duty-hour and some evening use, and overnight sign-out procedures had been arranged when necessary.

At the conclusion of each interview, the Battalion Interviewee was asked to give general suggestions for increasing the effectiveness of the TEC program. Of 42 interviewees, 40 did have suggestions. Major areas of concern were needs for more lessons, more command emphasis, and a new system of information on available lessons.

Concerns about command emphasis included suggestions for more indoctrination and introduction to TEC at all levels from users and trainers to commanders. Means suggested were pamphlets and instruction in BCT, AIT, NCO courses and other schools.

Expressed needs for additional lessons included needs for more LAIs (and binders) as well as films/cassette sets, requests for more new lessons, and needs for additional copies on some topics.

Major complaints about the current TEC Status List centered around the confusion as to the exact date a lesson could be expected at the unit. Suggested improvements were the development of a list of lessons already in the field and a monthly or quarterly update of this. Also desired were periodic advance notices of new lesson arrival dates. Some Interviewees mentioned a need for documents serving to cross reference or interface TEC with other training materials and a listing of TEC topics by MOS.

Another area of concern was for CUE-SEE improvement. Suggestions were for truly portable CUE-SEEs which included rechargeable batteries and having cases which could be converted into stands. Other desirable features mentioned were "back-up" capability, long (20-50 ft.) cords, improved projector image, and capability of playing a cassette only on the CUE-SEE without running the light and fan. Several Interviewees also expressed needs for more CUE-SEEs.

Additional suggestions included: distribution of TEC lesson series in sets; more updating; A TOE slot for a Learning Center manager; trained unit repairmen for TEC; less repetitive, more difficult lessons; more company/battery level equipment (and accountability): and procedures to turn-in unneeded lessons and/or order only the parts (e.g., filmstrip) needed.

BRIGADE/DIVISION INTERVIEWS

A total of 12 brigade level and 4 division level Interviews were completed. Brigade level Interviewees included 7 S-3's, G-3's (or Assistant S-3's, G-3's) and 5 others who did not indicate specific positions. In all, 9 were officers and 3 were NCOs. Those who indicated particular training duties described these as some form of monitoring training programs and/or equipment. Interviewees had been in their current of positions from 4-36 months with a median time-in-position of 6 months. They had been familiar with TEC for 18-60 months with a median time of 36 months.

Division level interviewees were G-3's, Assistant G-3's and assisting NCOs. They had worked in their current positions from 1.5 to 9 months and had been familiar with TEC from 36-48 months.

All Interviewees were asked what they felt the objectives of the TEC program to be. About half (8) saw TEC as an individual training program to refresh and increase soldiers knowledge which: made additional information available, used a form of media familar to soldiers and was designed for easy understanding. Others (3) saw TEC as an audio-visual aid to instructors and supplement to unit training which eased the training burden.

All Interviewees agreed that the TEC program should be continued. They also indicated their preferences for TEC or other training methods as means of SQT study. In all 14 (87.5%) preferred TEC to classroom lectures, 11 (68.8%) preferred TEC to field or technical manuals, and 10 (62.5%) preferred TEC to the Soldier's Manual, demonstrations and training films. Just over half (9 or 56.3%) preferred TEC to small group instruction and almost no one preferred TEC to exercises using models (1 or 6.3%) or exercises using equipment (0).

When asked what they felt the role of a brigade level training office should be in the implementation of TEC, 3 Interviewees said "none," and 3 did not define a clear-cut role. Comments of remaining Interviewees may be summarized as follows. The brigade training office should know and insure that units are aware of the availability of TEC materials. This would include educating incoming officers (e.g., battalion S-3's), monitoring use periodically and assisting units with problems such as repair when necessary.

Division level Interviewees saw their roles similarily. Their suggested duties were assistance in repair and obtaining of equipment (and facilities) and guidance and setting of standards in training.

Interviewees were also asked to indicate the extent of command emphasis on TEC placed both from their levels downward and to their levels from higher levels of command. Both questions were to be answered on 5-point scales ("no extent - quite an extent"). Brigade Interviewees' responses yielded an average of 3.2 or just over a "moderate" extent of downward emphasis on TEC. The average of responses to the question on command emphasis from higher levels was 2.67 showing a "little" to "moderate" extent.

Division Interviewees were somewhat divided in opinion on the extent of downward emphasis from the division level. There were responses in both the "great" and "little" extent of emphasis categories. Interviewees generally agreed, however, that there was little or no emphasis on TEC from levels of command above division.

All Interviewees who responded definitely when asked whether or not they currently received information about TEC said that they did. Others did not know. Types of information mentioned as received were TEC Bulletins, TEC Status Lists, LAIs and occasional information from other TRADOC and USAREUR sources.

Finally, Interviewees were asked for general suggestions for improvement of the TEC program. Those given were similar to suggestions offered by Battalion Interviewees and included: calls for higher visibility of TEC to include further education about it in career courses, expansion to headquarters and headquarters companies at the brigade level, local reproduction capabilities, more detail in lessons, and better distribution to cover low-density MOSs. Also desired was better information on available lessons and better information (to include a

central address) on ordering.

Only 5 of the Interviewees indicated that brigade or division level facilities for TEC existed within their commands. Discussion of these indicated that their operation and problems were very similar to those found at battalion level facilities (e.g., staff, storage, hours.).

TASC INTERVIEWS

A total of 7 TASC interviews were completed. These were, in most cases, with civilians who had worked with TEC for times ranging from 24 months to the first local receipt of TEC equipment.

These Interviewees were first asked to rate the Beseler CUE-SEE on its failure rate in comparison to other training equipment. Responses were quite varied. Half the Interviewees saw the CUE-SEE as having an above average to very high failure rate while the other half saw it as having a below average failure rate. One Interviewee did not know.

Most often mentioned malfunctions of the CUE-SEE involved the mirror-reflector, framer, circuit board and synchronization mechanism. The only difficulties mentioned with regard to lessons were slippage of the film-strip spring and occasional tapes recorded at too low a level.

Interviewees were generally reluctant to name a single cause for CUE-SEE malfunction. Only one felt most malfunctions to be attributable to rough usage and one felt them to be due to poor design. Others considered malfunctions to be attributable to some combination of rough usage, sensitivity of design and inadequate preventive maintenance.

No CONUS Interviewees knew of problems in receiving CUE-SEEs or returning them to units. USAREUR Interviewees were experiencing the first weeks of a new system and had too little experience with it for comments.

Four (4) of the Interviewees felt that TEC equipment was not repaired within a reasonable length of time and all 4 attributed this problem to insufficient manpower. Several also stated that they were unable to direct exchange (DX) serviceable equipment for broken equipment due to repair backups or having such equipment already loaned out.

All Interviewees indicated that records were kept on TEC equipment. These included forms 2407(5), 2404(4) and 4125(1) as well as other miscellaneous forms (DA 4103, DA 1687, DA 314, DA 3903).

All but one Interviewee indicated that they had the TEC Maintenance and Service Manual. However, some felt that they needed further information on how to clean and fix the machine as well as circuit board schematics. (It might be noted that not all TASCs sampled were considered

to be repair centers for other than minor problems.) Interviewees also mentioned needs for fuses, bulbs, mirrors, screens, belts and testing equipment for troubleshooting.

No Interviewees mentioned problems in receiving any materials from Tobyhanna. Likewise, no problems other than the previously discussed USAREUR repair backlog were mentioned with regard to forwarding equipment to major repair facilities.

General comments and suggestions for improvement were similar to those found with other types of Interviewees. They included suggestions for: more training for repairmen, more staff members, advance notice of new lesson arrivals, automatic receipt of manuals (as opposed to ordering) and some suggestions for CUE-SEE redesign (e.g., make drive-belt screw more accessible, allow fast removal of height-adjustment leg).

REFERENCES

Knerr, Claramae S., Downey, Ronald G. and Kessler, John J. Training individuals in Army units: Comparative effectiveness of selected TEC lessons and conventional methods. ARI Research Report 1188. December 1975.

McCluskey, Michael R. and Tripp, James M. An evaluation of the utilization, maintenance and perceived benefits of the Training Extension Course (TEC) (Tech. Rep. 75-18). Alexandria, VA: Human Resources Research Organization, June 1975.

Shelnutt, Jack B. Survey instruments to examine the use and accountability of the Army Training Extension Courses. Fort Benning, GA: Litton-Mellonics Systems Development Division, 1977.

Tempkin, Sanford, Connolly, J. A., Marvin, M. D., Valdes, A. L. and Caviness, J. A. A cost assessment of Army training alternatives. ARI Research Problem Review 75-3. August 1975.

APPENDIXES

APPENDIX A PHASE 1 TEC USAGE FORM AND INSTRUCTIONS

PT-5144A

INSTRUCTIONS

1. Data collection: Forms should be used 4 October 1976 through 29 November 1976, inclusive.

2. Distribution of forms:

Forms should be distributed to all facilitites where TEC is used by the battalion. This might be the battalion learning center only. However, if any additional or alternate "centers" are used (e.g. Post MOS Library, company areas, brigade level center), forms should be kept there also.

Please contact any such centers to insure that they do have forms. If not, a set of forms and instructions should be sent to them. Additional forms may be requested from the Army Research Institute (ARI-address inclosed) if needed.

3. Return of forms: Completed forms should be kept at the designated TEC facilities and returned together at the end of the survey period using the address label provided. In case the address label is misplaced, send the completed forms to: TEC, Army Research Institute - Fort Benning Field Unit, P.O. Box 2086, Fort Benning, Georgia 31905.

4. Negative reply: It is possible that a case could occur where a form could not be filled out. Keep a record of this case or cases and return this along with the completed TEC usage forms. At this time unusual circumstances affecting usage should be reported. A TEC Usage Summary Questionnaire has been inclosed for this purpose.

5. Administration: For each usage form, all questions in the large block to the left of the form are to be completed by the TEC lesson custodian. Time/date checked in must be filled in when the lesson is returned. All questions in the large block to the right of the form should be completed by the TEC user. This may be done before or after viewing the TEC lesson. The user may take the form with him while he views the lesson, but the custodian must insure that the form is returned along with the lesson. The lesson custodian should also explain the form to the user and/or make these instructions available to him.

6. Group vs. Individual forms (explanation): There are two sides to each TEC usage form. Side 1 is the TEC Individual Usage Form (red). Side 2 is the TEC Group Usage Form (green). Each side is designed for different types of TEC usage.

7. When to use which side of the form:

a. INDIVIDUAL USAGE FORM (Side 1, Red)

This side gives the most complete information about the individual TEC user. For this reason it is desirable to use the individual form whenever possible.

The typical case for use of this side of the form is when an individual soldier comes into a learning center to use a TEC lesson. This form should also be used if a small group of 5 or fewer soldiers should happen to come in to study the same TEC lessons together. Finally, the individual form would be used in the rare circumstance under which an individual would check a lesson out of a center for personal use.

b. TEC GROUP USAGE FORM (Side 2, Green)

It is understood that there are circumstances under which time and conditions will not permit collection of data from every individual user of a TEC lesson. It is under these circumstances that the Group Usage Form is designed to be used.

The first of these circumstances would be a case where an entire platoon or similar large group comes into a center at one time to view a set of TEC lessons in a classroom or county-fair style. Rather than having each individual complete a form for each lesson, one group form per lesson or lesson series may be used. Please note that this form should not be used to cover all "heavy individual traffic" periods. Nothing will be gained by using group forms if each soldier views a different lesson or lesson series.

The second typical use of a TEC group usage form would be when TEC is used by a class and projected from the back of a Beseler CUE/SEE. It may be possible to administer individual forms to a small class if it is held in the learning center, but for large classes or those held outside the center the group form is more practical.

A third use of the group form is for those times when a lesson is checked out of the center for use. The lesson may be checked out for group use, to provide opportunity for individual use in the company area, or both. Thus, one form may cover general instances of use when the lesson is checked out of the center. Please note that in cases where TEC lessons are kept semi-permanently at company level (due to lack of facility for a battalion-level learning center,etc.) use of the Group form is not appropriate. Individual forms should be kept with the lessons and completed as lessons are used.

If instances of TEC use occur which do not correspond to the above examples, your judgment must be used in deciding which form is appropriate. The rule-of-thumb is to use the individual form where at all practical.

In the rare case that no form can be completed, a note should be made of this and returned along with the completed batch of forms at the end of the survey period.

8. SUMMARY

a. In the Learning Center use:

(1) The group form only with large organized groups, e.g. half of a platoon or larger.

(2) Use the individual form in all other cases.

b. When a lesson is checked out use:

(1) The group form (one form for entire check-out period.)

(2) Use individual forms if lessons are checked-out on a semi-permanent basis or are kept in company areas where no battalion level or above learning center exists.

c. When an individual checks out more than one lesson, only one form need be completed if all of the lessons are in the same series (that is, consecutively numbered); but if the lessons are from different series a separate form must be completed for each series.

INSTRUCTIONS FOR COMPLETING EACH QUESTION

1. This section gives specific instructions for completion of each question on the TEC Usage Forms. Sample forms are attached (Attch. 1) on which each question has been numbered to correspond with the number of the paragraph in the instructions which explains how it should be completed.

2. This part of the instructions is divided into three sections. They are:

A. Lesson Custodian Section

B. Individual Usage Form

C. Group Usage Form

The TEC Lesson custodian should complete Section A on all forms. Section B or C is to be completed by the user. However, the lesson custodian should explain the user's section to him and/or make these instructions available to him.

A. LESSON CUSTODIAN SECTION

1. FACILITY

a. Type of facility:

ARI realizes that 2 or more of the terms listed may describe a given center. For example a TEC "learning center" may be housed in an "MOS Library," or both may be located in an "education center". Mark the term that best describes the facility's total function. If necessary, attach an explanation to the batch of completed forms when they are returned.

b. Level of facility:

Please indicate the level at which the current TEC facility is intended to serve. Although TEC is distributed predominantly at the battalion level, battalion level facilities for TEC use are not always readily available. Some have temporarily solved this problem by combining lessons into a brigade level facility. Others have located lessons in company areas.

2. LESSON NUMBER

If more than one lesson of a series is requested by an individual, it is not necessary to fill out a separate form for each lesson; mark only the number of the LOWEST NUMBERED LESSON among those required. All lessons in a series match on the first 6 digits of the lesson number and should be consecutively numbered on the last 4 digits. If an individual requests lessons from more than one series, a SEPARATE FORM must be filled out for each series.

3. NUMBER OF LESSONS IN SERIES

a. Requested:

Indicate how many of the lessons in the series were requested by the TEC user.

b. Available:

Under "available" indicate the number of lessons OF THOSE REQUESTED that are available for use at the time of request. Do not indicate the total number of lessons in the series you have on-hand (unless, of course, the entire series was requested). If one or more lessons are requested but NONE of the requested lessons are available, no usage form need be completed.

4. DATE/TIME CHECKED OUT:

On the Individual Usage Form (Side 1, red) simply mark the date and time checked out and time checked in.

5. DATE/TIME CHECKED IN:

It is very easy to forget to mark "Time checked in" since the rest of the form may have already been completed when the lesson is returned. Please do not forget to do so.

On the Group Usage Form (Side 2, green) date and time checked out should be marked. Since the form is designed to cover those cases where lessons are taken from the center, DATE checked in should be marked. Again, when the lesson is returned, please do not forget to enter the date.

B. INDIVIDUAL USAGE FORM

6. UNIT: The example under "instructions" shows how this block should be filled in. Although it is not shown in the example, be sure to include the branch designation. This is important. An occasional unit designation may not fit this format so that the mark sense blocks cannot be properly filled in. In this case be sure that complete information is written in the space provided.

7. GRADE: Self-evident.

8. PRIMARY MOS: Self-evident.

9. SSAN: According to the privacy act of 1974 answering this question is voluntary. It is suggested that you post the inclosed freedom of information statement (Atch. 2) in a visible location.

10. NUMBER OF USERS IN GROUP:

It is possible that 2 or 3 individual soldiers could come into a center to study a TEC Lesson together. In such a case, do not use the group form. Each soldier should fill out an individual form, and should indicate in this block the number in his small group who plan to view the lesson together.

11. LESSON PRETEST:

The user should answer "yes" only if he really plans to take the pretest.

12. USE IS: Self-evident.

13. USE OF THIS TEC LESSON: User should answer "never" unless he has seen this particular TEC lesson before, either by himself or in a group.

14. TEC LESSONS PER MONTH: The user should estimate as accurately as possible the average number of TEC lessons used each month.

15. PRIMARY REASON FOR USE: Mark only one answer. Choose the most important reason.

C. GROUP USAGE FORM

16. UNIT USING LESSONS:

It is assumed that all or most of the TEC users in a single group come from the same company. The example under "instructions" shows how this block should be filled in. Although it is not shown in the example, be sure to include the branch designation. This is important. An occasional unit designation may not fit this format so that the mark sense blocks cannot be properly filled in. In this case be sure that complete information is written in the space provided.

17. GRADE OF SOLDIER REQUESTING LESSON:

The information required here is the grade of the group leader or instructor (who will often be the highest ranking individual in the group). This person's grade should be marked in even though the lesson may be actually picked up and returned by a messenger. Do not use the messenger's grade and do not attempt to include the grades of all those using the lesson.

18. MOS MOST COMMON AMONG USERS:

Do not attempt to include all MOS's held by users. Mark in only the one that is held by the most users.

19. PERCENTAGE OF USERS HAVING THIS MOS:

Simply calculate or estimate as accurately as possible the percentage of the total users holding the MOS listed.

20. NUMBER OF PEOPLE USING THE LESSON:

For a lesson checked out of a learning center, include in the total all groups and individuals who used that lesson while it was out.

21. NUMBER USING PRETEST:

Include in this estimate anyone taking any of the pretests that go with the lesson series. Please answer as accurately and honestly as possible. One purpose of this question is to find out whether TEC users have found it practical to use lesson pretests with groups.

22. WHERE LESSON USED: Self-evident.

23. TYPE OF USE:

Please mark at least one of each of the three groupings: (a) voluntary-mandatory, (b) on-duty - off-duty, (c) one-more than one person per Beseler. If both of any one pair are appropriate, mark both. For example, if the lesson was used at two different times, once on-duty and once off-duty, place a mark by each.

24. LESSON WAS:

Mark both "projected" and "shown directly" if the lesson was used more than once and both apply.

25. MATERIALS/EQUIPMENT COVERED IN LESSON:

This question does not refer to required materials. It refers only to the main focus of lesson content. For example, in a lesson about the M16, was the weapon on hand while the lesson was being viewed? Materials such as TM's, maps, charts, and forms should be considered only if lesson content focuses on their use. Generally paper, pencil and minor items should be ignored. If the lesson does not concern materials or equipment (e.g., leadership) answer "no".

26. PRIMARY REASON FOR CHECKING OUT LESSON:

If a lesson is used by a group in the learning center, mark only one answer. A lesson may be used several times while checked out. In this case, mark one answer for each different instance of use having a different purpose.

ARMY RESEARCH INSTITUTE

TEC INDIVIDUAL USAGE FORM

TYPE OF FACILITY

- EDUCATION CENTER
- LEARNING CENTER
- MOBILE LEARNING CENTER
- MTT LIBRARY
- NCO ACADEMY
- NG ARMORY
- PRIVATE FACILITY
- TRADOC SCHOOL
- USAR SCHOOL
- OTHER (WRITE IN): _____

LEVEL OF FACILITY

- CO
- BN
- BDE
- DIV
- POST
- OTHER (WRITE IN): _____

LESSON NUMBER (WRITE IN)

_____ - _____ - _____

DATE CHECKED OUT — MTH / DAY

NO. OF LESSONS IN SERIES — REQUESTED / AVAILABLE

TIME CHECKED OUT

TIME CHECKED IN

▲ TO BE FILLED IN BY CUSTODIAN ▲

UNIT (WRITE IN)

• CO • BN
• BTRY • SQDN
• TRP

_____ _____ _____

- A
- B
- C
- D
- HHQ
- SPT

1ST 2ND 3RD 4TH 5TH 6TH

- ADA
- ARMOR
- ARTILLERY
- AIR CAV
- CAVALRY
- INFANTRY
- OTHER

INSTRUCTIONS:

1. USE #2 PENCIL ONLY
2. COMPLETELY ERASE ANY MARKS YOU WISH TO CHANGE
3. FILL IN AS PER SAMPLE SHOWN BELOW

1

UNIT NUMBER

HQ 1 15

- A
- B
- C
- D
- HHQ

GRADE

PRIMARY MOS (ENLISTED ONLY)

SSAN (LAST 4 DIGITS)

NUMBER OF USERS IN GROUP

- 1
- 2
- 3
- 4
- 5 OR MORE

DID YOU CHECK OUT THE LESSON PRETEST FOR USE?

- YES
- NO

USE IS

- VOLUNTARY
- MANDATORY

USE IS

- ON DUTY
- OFF DUTY

HAVE YOU USED THIS TEC LESSON BEFORE?

- NEVER
- ONCE
- MORE THAN ONCE

ON THE AVERAGE HOW MANY TEC LESSONS DO YOU USE EACH MONTH?

0 1 2 3 4 5 6 7 8 9 OR MORE

PRIMARY OR MOST IMPORTANT REASON FOR USE OF LESSON

- PREPARATION FOR MOS/SQT TEST
- PREPARATION FOR PROMOTION BOARD
- INITIAL TRAINING IN NEEDED SKILL
- REFRESHER TRAINING FOR DUTY POSITION
- INTEREST IN SUBJECT MATTER
- UNIT TRAINING REQUIRED BY SUPERIOR
- OTHER (WRITE IN) _____

_____

_____

▲ TO BE FILLED IN BY USER ▲

ARMY RESEARCH INSTITUTE

TEC GROUP USAGE FORM

TYPE OF FACILITY / **LEVEL OF FACILITY**

- LEARNING CENTER
- LEARNING CENTER
- MOBILE LEARNING CENTER
- MOS LIBRARY
- MEDIA LIBRARY
- ARMORY
- BASE FACILITY
- OTHER (WRITE IN)

LESSON NUMBER (WRITE IN)

DATE CHECKED OUT — MTH / DAY

NUMBER OF LESSONS IN SERIES — SELECTED / AVAILABLE

TIME CHECKED OUT

DATE CHECKED IN — MTH / DAY

▲ TO BE FILLED IN BY CUSTODIAN ▲

UNIT USING LESSONS (WRITE IN)

- CO
- BTRY
- TRP
- BN
- REGIMENT

A			ADA
B			ARMOR
C			ARTILLERY
D			AIR CAV
HQ			CAVALRY
SPT			INFANTRY
			OTHER

INSTRUCTIONS

1. USE #2 PENCIL ONLY
2. COMPLETELY ERASE ANY MARKS YOU WISH TO CHANGE
3. FILL IN AS PER SAMPLE SHOWN BELOW

2

UNIT (WRITE IN): HQ CO / 2 BN SQDN / 15 PLT BTRY TRP

GRADE OF SOLDIER REQUESTING LESSON

O	1
W	2
E	3
	4
	5
	6
	7
	8
	9

MOS MOST COMMON AMONG USERS (WRITE IN)

PERCENT OF USERS HAVING THIS MOS

- 100%
- 90%
- 80%
- 70%
- 60%
- 50% OR LESS

HOW MANY PEOPLE USED THE LESSON WHILE IT WAS CHECKED OUT? (WRITE IN)

HOW MANY PEOPLE TOOK THE PRETEST THAT COMES WITH THE LESSONS (IF AT LEAST ONE PRETEST IN SERIES LESSONS WERE USED)

- ALL
- MOST
- SOME
- NONE

WHERE WAS THE TEC LESSON USED?

- IN THE FIELD
- IN COMPANY AREA
- IN LEARNING CENTER (IF ABOVE COMPANY LEVEL)

TYPE OF USE (CHECK ALL THAT APPLY TO PERIOD OF USE)

- VOLUNTARY
- MANDATORY
- ON DUTY
- OFF DUTY
- ONE PERSON PER BESELER OR AUDIO CASSETTE
- MORE THAN ONE PERSON PER BESELER OR AUDIO CASSETTE

LESSON WAS

- AUDIO ONLY
- VIEWED DIRECTLY ON BESELER CUE SEE
- PROJECTED FROM THE REAR OF BESELER ONTO LARGER SCREEN

WERE ANY MATERIALS OR EQUIPMENT COVERED IN LESSONS CONTENT USED WITH LESSON?

- YES
- NO

PRIMARY OR MOST IMPORTANT REASON FOR CHECKING OUT LESSON

- INITIAL UNIT TRAINING
- REFRESHER UNIT TRAINING
- TO MAKE LESSONS AVAILABLE FOR UNSCHEDULED INDIVIDUAL STUDY
- OTHER (WRITE IN)

▲ TO BE FILLED IN BY GROUP LEADER / INSTRUCTOR ▲

DATA REQUIRED BY THE PRIVACY ACT OF 1974

TITLE: TEC Individual and Group Usage Questionnaires

PRESCRIBING DIRECTIVE: AR 70-1

AUTHORITY: 10 USC Sec 4503

PURPOSE: The data collected with the attached form are to be used for research purposes only.

This is an experimental data collection form developed by the U. S. Army Research Institute for the Behavioral and Social Sciences pursuant to its research mission as prescribed in AR 70-1. The last four digits of your Social Security Account Number are requested for administrative and statistical control purposes only. The providing of this information is strictly voluntary. There will be no effect on individuals for not providing this information. Full confidentiality of your responses will be maintained in the processing of these data.

TEC USAGE SUMMARY QUESTIONNAIRE

(To be completed at the end of the eight-week sample period by the individual in charge of TEC usage form administration)

1. Name _____ (Optional)

2. Grade _____

3. a. To how many separate facilities were these forms distributed? _____

   b. Comments on facility type(s): _____

   _____

   _____

4. a. How many lesson custodians were involved in TEC usage form completion? _____

   b. Grade(s) of custodian(s): _____

5. How many different TEC lessons are available to your users? _____

6. How many operative Beseler CUE/SEE devices were available over the eight-week test period? _____

7. a. In how many cases over the eight-week period was a lesson checked out without a Usage Form being completed? _____

   b. Comments: _____

   _____

   _____

8. Briefly describe any unusual circumstances occurring over the eight-week test period that may have affected TEC use. _____

   _____

   _____

9. Any comments and/or suggestions you might wish to make regarding this survey would be appreciated. (Write comments on back of page)

APPENDIX B SAMPLED UNITS

Sampled Units for TEC Usage Study

Phase 1 Summary		Phase 2 Summary	
50	AC Combat Arms Units (CONUS)	28	AC Combat Arms Units (CONUS)
	17 Infantry		9 Infantry
	7 Armor		5 Armor
	14 Artillery		6 Artillery
	4 ADA		6 ADA
	7 Cavalry		2 Cavalry
	1 Special Forces		
75	NG Combat Arms Units	39	NG Combat Arms Units
	30 Infantry		15 Infantry
	10 Armor		5 Armor
	23 Artillery		12 Artillery
	4 ADA		3 ADA
	6 Cavalry		4 Cavalry
	2 Special Forces		
9	USAR Combat Arms Units	5	USAR Combat Arms Units
	3 Infantry		2 Infantry
	1 Armor		1 Armor
	4 Artillery		2 Artillery
	1 Special Forces		
1	NG OCS Academy	13	Combat Arms Units (USAREUR)
			4 Infantry
2	USAR Schools		4 Armor
			3 Artillery
2	USAR Training Brigades		2 ADA
37	TRADOC Activities		
	7 NCO Academies		
	22 Schools and Institutes		
	8 Training Brigades		
175	Units and Activities Total	85	Units Total

AC Sampled Combat Arms Units

CONUS	Phase 1	Phase 2	Interview
1st Cavalry Division			
1st Bn, 12th Cav (M)	X	X	X
1st Bn, 9th Cav (ACS)	X	X	
5th Bn, 7th Cav (M)	X		
1st Bn, 82nd Arty	X		
1st Bn, 68th ADA	X		
2nd Armored Division			
1st Bn, 50th Inf	X		
1st Bn, 67th Ar	X	X	X
1st Bn, 41st Inf	X	X	
1st Bn, 3rd Arty	X		
9th Infantry Division			
3rd Bn, 39th Inf	X	X	
2nd Bn, 77th Ar	X		
2nd Bn, 47th Inf	X		
1st Bn, 11th Arty	X	X	
3rd Sqdn, 5th Cav	X		
4th Mechanized Infantry Division			
1st Bn, 10th Inf	X		X
1st Bn, 12th Inf	X		
2nd Bn, 34th Ar	X		
1st Bn, 29th Arty	X		
4th Bn, 61st ADA	X	X	X
1st Bn, 22nd Inf		X	X
1st Bn, 8th Inf		X	X
6th Bn, 32nd Ar		X	X
1st Bn, 77th Ar		X	X
1st Bn, 27th Arty		X	X
1st Infantry Division			
1st Bn, 28th Inf	X		
2nd Bn, 63rd Ar	X		
1st Bn, 5th Arty	X		
2nd Bn, 76th Arty		X	X
3rd Bn, 6th Arty		X	X
1st Bn, 18th Inf		X	X
1st Bn, 63rd Ar		X	X

CONUS	Phase 1	Phase 2	Interview
82d Airborne Division			
1st Bn, 504th Abn Inf	X	X	X
3d Bn, 325th Abn Inf	X		
1st Bn, 505th Abn Inf	X		
1st Bn, 319th Arty	X		
3d Bn, 4th ADA	X		
4th Bn, 68th Ar	X	X	
101st Airborne Division			
2d Bn, 502nd Inf	X		
1st Bn, 501st Inf	X	X	
2d Bn, 503rd Inf	X		
4th Bn, 77th Arty	X		
2d Sqdn, 17th Air Cav	X		
7th Infantry Division			
2d Bn, 8th Arty	X		
2d Bn, 32nd Inf	X	X	
1st Bn, 51st ADA		X	X
5th Infantry Division			
3d Bn, 77th Ar	X	X	
2d Bn, 21st FA	X	X	X
24th Infantry Division			
2d Bn, 34th Inf	X		
1st Bn, 35th Arty	X		
Separate Brigades, Groups and Regiments			
1st Rgr Bn, 75th Inf	X		
1st Bn, 18th Arty, 75th Arty Gp	X		
2d Bn, 37th Arty, 212th Arty Gp	X		
2d Bn, 2d Arty, 214th Arty Gp	X	X	
4th Sqdn, 9th Cav, 6th Cav Bde (AC)	X		
1st Bn,6th Arty, XVIII AbnCorpsArty	X		
3d Bn, 5th Special Forces Gp	X		
4th Bn, 37th Ar, 194th Ar Bde	X		
1st Bn, 58th Inf, 197th Inf Bde	X	X	
3d Sqdn, 3d ACR	X		
1st Bn, 51st ADA	X	X	
4th Bn, 1st ADA		X	X
1st Bn, 55th ADA		X	X

USAREUR	Phase 1	Phase 2	Interview
1st Armored Division			
1st Bn, 13th Ar		X	X
1st Bn, 6th Inf		X	X
3rd Infantry Division			
2nd Bn, 30th Inf		X	X
1st Bn, 64th Arm		X	X
1st Bn, 76th FA		X	X
3rd Bn, 67th ADA		X	X
3rd Armored Division			
2nd Bn, 48th Inf		X	X
2nd Bn, 27th FA		X	X
3rd Bn, 61st ADA		X	X
3rd Bn, 32nd Ar		X	
8th Infantry Division			
1st Bn, 39th Inf		X	X
3rd Bn, 16th FA		X	X
4th Bn, 69th Ar		X	X

National Guard Sampled CA Units (By State)

		Phase 1	Phase 2	Interview
AL	1st Bn, 167th Inf	X		
	2d Bn, 117th FA	X		
AR	3d Bn, 153rd Inf	X	X	X
CA	1st Bn, 184th Inf	X		
	1st Bn, 185th Ar	X	X	X
CO	2d Bn, 157th Arty	X		
CT	1st Bn, 169th Inf	X	X	
FL	3d Bn, 124th Inf	X		
	1st Bn, 265th ADA	X		
GA	1st Bn, 108th Ar	X		
IL	2d Bn, 122nd Arty	X	X	X
	1st Bn, 131st Inf	X	X	
IN	2d Arty Bn, 150th Arty	X		
	1st Bn, 152nd Inf	X		
IA	1st Bn, 168th Inf	X	X	
	1st Bn, 194th Arty	X		
KS	2d Bn, 130th Arty	X		
	2d Bn, 137th Inf	X	X	
KY	1st Bn, 123rd Ar	X	X	X
MD	1st Bn, 115th Inf	X		
MA	2d Bn, 181st Inf	X		
	1st Bn, 110th Ar	X		
MI	1st Bn, 225th Inf	X		
	1st Bn, 182nd Arty	X	X	X
MN	2d Bn, 135th Inf	X	X	
	1st Bn, 135th Inf	X		
	1st Bn, 175th Arty	X		

		Phase 1	Phase 2	Interview
MS	1st Bn, 114th Arty	X		
	2d SF Bn, 20th SF Gp, 1st SF	X		
MO	1st Bn, 129th Arty	X	X	
MT	2d Sqdn, 163rd AC	X		
NE	2d Bn, 134th Inf	X	X	X
NH	3d Bn, 197th Arty	X	X	X
NJ	5th Bn, 112th Arty	X		
	2d Bn, 102nd Ar	X		
	1st Bn, 114th Inf	X		
	2nd Bn, 113th Inf		X	
	3rd Bn, 113th Inf		X	
	2nd Bn, 114th Inf		X	
	1st Bn, 112th FA		X	X
	3rd Bn, 112th FA		X	
	4th Bn, 112th FA		X	
	1st Bn, 102nd Ar		X	
	5th Bn, 102nd Ar		X	
	5th Bn, 117th Cav		X	
NM	1st Bn, 200th ADA		X	
	3rd Bn, 200th ADA		X	
	2d Bn, 200th ADA	X	X	
NY	1st Bn, 187th Arty	X		
	1st Bn, 69th Inf	X	X	
	1st Bn, 127th Ar	X		
	1st Bn, 108th Inf	X		
	1st Sqdn, 101st Cav	X	X	
NC	2d Bn, 120th Inf	X		
	2d Bn, 252th Ar	X		
OH	1st Bn, 148th Inf	X	X	
	2d Bn, 174th ADA	X		
OK	1st Bn, 279th Inf	X		
	1st Bn, 189th Arty	X	X	X
OR	3d Sqdn, 116th Ar Cav	X	X	X

		Phase 1	Phase 2	Interview
PA	1st Bn, 109th Inf	X	X	
	1st Bn, 103rd Ar	X		
	1st Bn, 108th Arty	X		
	1st Sqdn, 104th Ar Cav	X	X	
RI	6th SF Bn, 20th SF Gp, 1st SF	X		
SC	1st Bn, 178th Arty	X		
	1st Bn, 118th Inf	X	X	
SD	2d Bn, 147th Arty	X	X	
TN	1st Bn, 181st Arty	X		
	2d Bn, 117th Inf	X		
TX	1st Sqdn, 124th Cav	X		
	6th Bn, 112th Ar	X		
	2d Bn, 131st Arty	X	X	
	1st Bn, 141st Inf	X	X	
UT	1st Bn, 145th Arty	X	X	
VT	1st Bn, 172d Ar	X		
VA	2d Bn, 116th Inf	X		
	3d Bn, 111th ADA	X		
WA	1st Bn, 161st Inf	X		
WV	1st Bn, 201st Arty	X	X	
WI	1st Bn, 121st Arty	X		
	2d Bn, 128th Inf	X	X	
AK	5th Sqdn, 297th Ar Cav	X		
HI	2d Bn, 299th Inf	X		
PR	1st Bn, 295th Inf	X		
	2d Bn, 162nd Arty	X		

USAR Sampled CA Units

	Phase 1	Phase 2	Interview
1st Bn, 314th Inf, 157th Bde	X	X	X
5th Bn, 28th FA	X		
7th Bn, 1st FA	X	X	
1st Bn, 12th SF Gp	X		
3d Bn, 35th Inf, 187th Inf Bde	X		
4th Bn, 20th FA	X	X	
8th Bn, 40th AR	X	X	
1st Bn, 410th Inf, 205th Inf	X	X	X
3d Bn, 42d Arty	X		

Miscellaneous Activities (USAR)

NG State OCS Academy (OK)	X
1st Bde, 100th Div (USAR Tng Div)	X
3d Bde, 100th Div	X
1150 USAR School (NY)	X
4159 USAR School (TX)	X

Sampled TRADOC Activities (Phase 1 only)

NCO Academies

Ft. Benning
Sergeants Major Academy, Ft. Bliss
Ft. Bragg
Ft. Campbell
Ft. Riley
Ft. Lewis
Ft. Jackson

Schools and Institutes

Ft. Sill Institute
Armor School
Ordinance School
Quartermaster School
Engineer School
Transportation School
Missiles and Munitions School
Defense Language Institute
Security Agency School
USASJAG School
Chaplain School
Institute of Administration
Intelligence School
Signal School
Military Police School
Field Artillery School
USACGSC
Academy of Health Sciences
Infantry School
45th Inf Div Combat Leaders School
III Corps Troop School
Aviation Center
US Military Academy

Training Brigades

1st Tng Bde, Ft. Knox
15th Bn, 4th Tng Bde, Ft. Knox
5th BCT Bde, Ft. Knox
17th Bn, 5th Tng Bde, Ft. Knox
USA Retraining Bde, Ft. Riley
2nd Cannon Tng Bn, Ft. Sill
1st Bn, 1st Tng Bde, Ft. Benning
4th ADA Tng Bn FAW

APPENDIX C PHASE 2 QUESTIONNAIRES AND INTERVIEW SCHEDULES

TEC User Questionnaire

The purpose of this questionnaire is to provide the U.S. Army with information concerning the effectiveness of the Training Extension course (TEC) program in teaching MOS - related materials to the individual soldier.

Please be honest and frank with your answers. The Army needs reliable information from you in order to make decisions on how to improve individual training in the future.

- What is your primary MOS? _____
- What is your secondary MOS? _____
- What is the MOS for the job you are assigned? _____
- Write in the following information about your unit:

  (a) your Company _____

  (b) your Battalion _____

  (c) your Combat Arms Branch _____

- What is your pay grade? _____

US Army Research Institute for the
Behavioral and Social Sciences
-Fort Benning Field Unit-

DATA REQUIRED BY THE PRIVACY ACT OF 1974

TITLE: TEC User Questionnaire

PRESCRIBING DIRECTIVE: AR 70-1

AUTHORITY: 10 USC Sec 4503

PURPOSE(S): The data collected with the attached form are to be used for research purposes only.

This is an experimental personnel data collection form developed by the U.S. Army Research Institute for the Behavioral and Social Sciences pursuant to its research mission as prescribed in AR 70-1. When identifiers (name or Social Security Number) are requested they are to be used for administrative and statistical control purposes only. Full confidentiality of the responses will be maintained in the processing of these data.

Your participation in this research is strictly voluntary. Individuals are encouraged to provide complete and accurate information in the interests of the research, but there will be no effect on individuals for not providing all or any part of the information.

1. Should the TEC program be continued?

Yes, it is a very good program	☐ 1	
Yes, it does some good	☐ 2	12
No, it does not do enough good	☐ 3	
No, it is a waste of time	☐ 4	
I don't know	☐ 5	

2. What do other soldiers in your unit think about TEC?

Most of them think it is a good program . . .	☐ 1	
About half of them like it, but half don't . .	☐ 2	13
Most of them think it is a waste of time . . .	☐ 3	
I don't know	☐ 4	

3. (a) Have you used TEC?

Yes	☐ 1	
No	☐ 2	14

(b) If the answer to the above question is No (you have never used a TEC lesson) go to question #15 .

(c) Write (in the box to the right) the approximate number of TEC lessons that you have used . . . . . ☐☐ 1 15-16

4. Where do you get information about TEC? (mark all that apply)

My unit trainer	☐	17
Soldier's Manuals	☐	18
Other soldiers in my unit tell me	☐	19
The post newspaper(daily bulletin)	☐	20
People at the learning center	☐	21
Posters advertising TEC	☐	22
I find out about TEC in other ways	☐	23

Tell what the other ways are: _____

_____

5. Does the commander of your unit want you to use TEC material?

24

Yes . . . . . ☐ 1

No . . . . . ☐ 2

I don't know . . . . . ☐ 3

6. When you use the sight and sound TEC lessons, how often:

	Almost Always	Often	Sometimes	Almost Never	
(a) do you see the lesson at a machine by yourself instead of watching it on a wall or screen with other people	☐	☐	☐	☐	25
(b) would you rather see the lesson at a machine by yourself instead of watching it on a wall or screen with other people.	☐	☐	☐	☐	26
(c) do you have a trainer or someone to help you if you have trouble understanding the lesson	☐	☐	☐	☐	27
(d) would you rather have a trainer or someone to help you if you have trouble understanding the lesson .	☐	☐	☐	☐	28
(e) do you study TEC during off-duty hours.	☐	☐	☐	☐	29
(f) would you rather study TEC during off-duty hours . . .	☐	☐	☐	☐	30
(g) even during duty hours, would you rather study TEC on your own instead of with your unit	☐	☐	☐	☐	31

7. Would you study TEC if no one in your unit told you to do it?

32

Yes . . . . . ☐ 1

No . . . . . ☐ 2

8. Do you think the tests that you take before seeing the TEC lessons are useful?

33

Yes . . . . . ☐ 1

No . . . . . ☐ 2

I don't know, I have never taken one . . . . . ☐ 3

9. (a) Have you operated the Cue/See machine which is used to present the sight and sound TEC lessons?

Yes . . . . . ☐ 1

No(if you have not operated the machine skip to question #11) . . . . . ☐ 2 34

(b) While you were watching a TEC lesson, how often did the sound track get out of step with the picture (that is, get out of syncronization)?

Never a problem . . . . . ☐ 1

Only once or twice . . . . . ☐ 2

Sometimes, but not often . . . . . ☐ 3 35

Most of the time . . . . . ☐ 4

(c) If the sound is out of step with the picture, do you know how to get the sound back into step with the picture?

Yes . . . . . ☐ 1

No . . . . . ☐ 2 36

I am not sure . . . . . ☐ 3

(d) How often has the machine used to present sight and sound TEC lessons broken down while you were trying to use it?

Never a problem . . . . . ☐ 1

Only once or twice . . . . . ☐ 2

Sometimes, but not often . . . . . ☐ 3 37

Most of the time . . . . . ☐ 4

10. While you were watching TEC lessons, how often would it have been useful to be able to back up the sound and picture to review a part of a TEC lesson?

Never a problem . . . . . ☐ 1

Only once or twice . . . . . ☐ 2

Sometimes, but not often . . . . . ☐ 3 38

Most of the time . . . . . ☐ 4

11. How often have you noticed something that was wrong in a TEC lesson?

Never a problem . . . . . ☐ 1

Only once or twice . . . . . ☐ 2 39

Sometimes, but not often . . . . . ☐ 3

Most of the time . . . . . ☐ 4

12. Would you rather learn what you need to know to get ready for the SQT by: (Mark one block for each line)

1 going to lectures on MOS topics	☐ or studying TEC	☐	40
2 watching demonstrations in classes . . .	☐ or studying TEC	☐	41
3 taking part in exercises using equipment	☐ or studying TEC	☐	42
4 taking part in exercises using models of equipment	☐ or studying TEC	☐	43
5 going to small group meetings on MOS topics	☐ or studying TEC	☐	44
6 watching training films	☐ or studying TEC	☐	45
7 reading the soldier's manual	☐ or studying TEC	☐	46

13. (a) Is it hard to study in the areas set up for TEC use?

Yes	☐ 1	
No	☐ 2	47
I don't know	☐ 3	

(b) If you marked yes, why is it hard to study? (check all that apply:

Too noisy	☐	48
Too crowded	☐	49
Poorly lighted	☐	50
Too small	☐	51
Too hot or cold	☐	52

Are there any other reasons? Describe them below:

_____

_____

14. Have you ever studied TEC lessons for any of the following reasons: (check all that apply)

To get ready for the SQT or MOS tests	☐	53
To get ready for the promotion board	☐	54
To learn about something totally new to you . .	☐	55
To provide MOS knowledge when your MOS was changed	☐	56
To review a subject you already knew about . .	☐	57
To prepare for an ARTEP	☐	58
Just because a subject was interesting to you .	☐	59
Because you wanted to increase your ability to do your present job	☐	60
To help you prepare yourself to teach others to do a task	☐	61

For some other reasons (Tell what reason was):

15. I do not use TEC or do not use TEC more often because: (mark each of the following statements as true, false, or uncertain)

	True	False	Uncertain	
(a) I have never heard of TEC before today.	☐	☐	☐	62
(b) I have heard of TEC, but I do not know much about it.	☐	☐	☐	63
(c) I do not need any additional Army training of any kind.	☐	☐	☐	64
(d) I do not need the kind of training I can get from TEC.	☐	☐	☐	65
(e) TEC will not help me get promoted.	☐	☐	☐	66
(f) TEC will not help me pass the SQT.	☐	☐	☐	67
(g) My superiors didn't tell me to use TEC.	☐	☐	☐	68
(h) TEC lessons will not help me do my job better.	☐	☐	☐	69
(i) My unit trainer does not use TEC in our training program.	☐	☐	☐	70
(j) I was not allowed to study TEC while on-duty.	☐	☐	☐	71
(k) I do not know where the TEC materials are kept.	☐	☐	☐	72
(l) The area where the TEC materials are kept is located too far away.	☐	☐	☐	73
(m) The area where the TEC materials are kept is often closed when I want to use it.	☐	☐	☐	74
(n) I do not like to study in the TEC facility.	☐	☐	☐	75
(o) Other soldiers were using TEC lessons when I wanted them.	☐	☐	☐	76
(p) Equipment used to present TEC lessons is often not available for me to use.	☐	☐	☐	77
(q) The TEC equipment is often broken when I want to use it.	☐	☐	☐	78
(r) I often can not get lessons that I want because we do not have them.	☐	☐	☐	79
(s) I have used all of the TEC lessons that are of interest to me.	☐	☐	☐	80

(t) There are other reasons I don't use TEC. Tell what those reasons are:

_____

_____

Unit Questionnaire

(Unit trainers and leaders)

The purpose of this questionnaire is to provide the U.S. Army with information concerning the effectiveness of the Training Extension Course (TEC) Program in teaching MOS - related material to the individual soldier.

The role of the Unit Officer/NCO is vital with respect to the effectiveness of the TEC program. The Army needs honest and frank information from you in order to make decisions on how to improve individual training in the future.

- What is your current position? _____
- What is your pay grade? _____
- Write in the following information about your unit:

  (a) your Company _____

  (b) your Battalion _____

  (c) your Combat Arms Branch _____

- Approximately how long have you worked with TEC material?

  _____years _____months

US Army Research Institute for the
Behavioral and Social Sciences
-Fort Benning Field Unit-

PT - 5144D

DATA REQUIRED BY THE PRIVACY ACT OF 1974

TITLE: TEC User Questionnaire

PRESCRIBING DIRECTIVE: AR 70-1

AUTHORITY: 10 USC Sec 4503

PURPOSE(S): The data collected with the attached form are to be used for research purposes only.

This is an experimental personnel data collection form developed by the U.S. Army Research Institute for the Behavioral and Social Sciences pursuant to its research mission as prescribed in AR 70-1. When identifiers (name or Social Security Number) are requested they are to be used for administrative and statistical control purposes only. Full confidentiality of the responses will be maintained in the processing of these data.

Your participation in this research is strictly voluntary. Individuals are encouraged to provide complete and accurate information in the interests of the research, but there will be no effect on individuals for not providing all or any part of the information.

1. Should the TEC program be continued?

Yes, it is a very good program	☐ 1	
Yes, it does some good	☐ 2	20
No, it does not do enough good	☐ 3	
No, it is a waste of time	☐ 4	
I don't know	☐ 5	

2. (a) Do the soldiers in your unit have any major trouble when they operate the projector used to present TEC lessons?

Yes	☐ 1	
No	☐ 2	21
I don't know	☐ 3	

(b) If yes, please describe the trouble:

3. (a) Have you used the Beseler Cue/See projector to present TEC lessons to several soldiers at once (projecting the image on a wall or screen)? (If no, skip to question #7)

Yes	☐ 1	22
No	☐ 2	

(b) Have any of the following problems restricted the use of the Beseler Cue/See projector as an aid to teaching small groups of soldiers (mark all that apply):

The quality of the projected image is poor. .	☐	23
The projected image is not large enough. . .	☐	24
The sound system is not adequate	☐	25

(c) Can you think of additional problems with the projector that restricted your ability to teach small groups?

(d) When you use the Cue/See projector to present TEC lessons to groups of soldiers, do you monitor their work and help them when they do not understand the lesson?

Almost always	☐ 1	
Often	☐ 2	26
Sometimes	☐ 3	
Almost never	☐ 4	

4. (a) Has the projector used to present TEC lessons failed frequently enough to hinder the effectiveness of the TEC program in your unit?

Yes . . . . . ☐ 1

No . . . . . ☐ 2 27

I don't know . . . . . ☐ 3

(b) If your answer is yes, please describe the most common malfunctions:

(c) Have the film cartridges or tape cassettes failed frequently enough to hinder the effectiveness of the TEC program in your unit?

Yes . . . . . ☐ 1

No . . . . . ☐ 2 28

I don't know . . . . . ☐ 3

(d) If your answer is yes, please describe the most common malfunction:

5. How were you originally informed on how to use TEC in your training program? (check all that apply)

I was not told how to use TEC . . . . . ☐ 29

Viewed TEC lesson for "green tabbers" . . . . . ☐ 30

Read literature from TEC . . . . . ☐ 31

Other. Please describe: 32

6. Do you feel this introduction was satisfactory?

Yes . . . . . ☐ 1

No . . . . . ☐ 2 33

Not sure . . . . . ☐ 3

7. (a) Are you kept informed of the arrival of new TEC lessons at your unit?

Yes . . . . . ☐ 1

No . . . . . ☐ 2 34

(b) If yes, please describe how:

8. (a) How are the pretests (LAI) that go with the TEC lessons used in your unit (check all that apply):

We do not use them in the training program . . . ☐ 35

As tests to assess individuals to see if they need <u>initial</u> training in a specific area . . . . ☐ 36

As tests to assess individuals to see if they need <u>refresher</u> training . . . . . ☐ 37

As proficiency exams for soldiers in the unit. . ☐ 38

As tests to get an overall picture of unit training readiness. . . . . ☐ 39

Other (write in) . . . . . ☐ 40

(b) Are these pretests useful?

Yes . . . . . ☐ 1

No . . . . . ☐ 2 41

I don't know . . . . . ☐ 3

9. Which method of training do you think best prepares a soldier for the SQT? For each line choose between TEC and the other type of training:

1 Going to lectures on MOS topics . . . . ☐ or studying TEC. ☐ 42

2 Watching demonstrations in classes. . . ☐ or studying TEC. ☐ 43

3 Taking part in exercises using equipment. ☐ or studying TEC. ☐ 44

4 Taking part in exercises using models of equipment . . . . . ☐ or studying TEC. ☐ 45

5 Going to small group meetings on MOS topics . . . . . ☐ or studying TEC. ☐ 46

6 Watching training films . . . . . ☐ or studying TEC. ☐ 47

7 Reading the soldier's manual. . . . . ☐ or studying TEC. ☐ 48

10. Is the lesson catalog system (at the place where you pick up TEC lessons) adequate?

Yes . . . . . ☐ 1

No . . . . . ☐ 2 49

I'm not sure . . . . . ☐ 3

11. How often have you noticed inaccurate information in a TEC lesson?

Never a problem . . . . . ☐ 1

Only once or twice . . . . . ☐ 2 50

Sometimes, but not often . . . . . ☐ 3

Most of the time . . . . . ☐ 4

12. To what extent is TEC used in your units for the following training tasks:

	To no extent	To a little extent	To a moderate extent	To quite an extent	To a great extent	
(a) To prepare soldiers for the SQT.	☐	☐	☐	☐	☐	51
(b) To prepare soldiers for the promotion board.	☐	☐	☐	☐	☐	52
(c) To provide initial training for individuals in the unit.	☐	☐	☐	☐	☐	53
(d) To provide MOS knowledge when some soldiers had their MOS changed.	☐	☐	☐	☐	☐	54
(e) To provide refresher/training	☐	☐	☐	☐	☐	55
(f) To prepare the troops for an ARTEP.	☐	☐	☐	☐	☐	56
(g) To provide information to soldiers that is of interest to them (not MOS or job related.	☐	☐	☐	☐	☐	57
(h) To increase a soldier's ability to do his present job.	☐	☐	☐	☐	☐	58
(i) To help prepare trainers and others to teach soldiers to do a specific task.	☐	☐	☐	☐	☐	59
(j) To provide training at a slower pace for those individuals who need it.	☐	☐	☐	☐	☐	60
(k) To provide remedial training for soldiers who have demonstrated their incompetence on a given task.	☐	☐	☐	☐	☐	61
(l) To provide make-up training for soldiers who have missed some unit training.	☐	☐	☐	☐	☐	62
(m) To provide follow-up training	☐	☐	☐	☐	☐	63
(n) With field exercises/ maneuvers.	☐	☐	☐	☐	☐	64
(o) As inclement weather training.	☐	☐	☐	☐	☐	65
(p) With skill practice exercises.	☐	☐	☐	☐	☐	66
(q) To provide gainful activity during slack periods.	☐	☐	☐	☐	☐	67
(r) To provide concurrent training while at ranges.	☐	☐	☐	☐	☐	68
(s) Other. Write in:						

13. How do you encourage the use of TEC (check all that apply, if any):

General commands to my unit . . . . . ☐ 69

Orders or requests to specific individuals in my unit . . . . . ☐ 70

Announcements encouraging use . . . . . ☐ 71

Briefings . . . . . ☐ 72

Rewards or recognition . . . . . ☐ 73

(Describe rewards or recognition if used):

Other forms of encouragement (write in):

14. (a) To what extent has there been command emphasis to use TEC from the company commander and staff?

To no extent at all . . . . . ☐ 1

To a little extent . . . . . ☐ 2

To a moderate extent . . . . . ☐ 3

To quite an extent . . . . . ☐ 4

To a great extent . . . . . ☐ 5

74

(b) To what extent has there been command emphasis to use TEC from the Battalion commander and his staff?

To no extent at all . . . . . ☐ 1

To a little extent . . . . . ☐ 2

To a moderate extent . . . . . ☐ 3

To quite an extent. . . . . ☐ 4

To a great extent . . . . . ☐ 5

75

(c) How have your superiors encouraged the use of TEC (check all that apply, if any):

General commands to my unit . . . . . ☐ 76

Orders or requests to specific individuals in my unit . . . . . ☐ 77

Announcements . . . . . ☐ 78

Briefings . . . . . ☐ 79

Rewards or recognition . . . . . ☐ 80

(Describe rewards or recognition, if used):

Other forms of encouragement (write in)

Battalion Interview

A. Information about Respondent (enter the following information:)

1. Bn _____ Combat Arms Branch _____

2. Title of Position _____ 3. Pay Grade _____

Brief summary of duties with regard to TEC: _____

_____

4. How long have you been in your current position? _____ years

____ months. How long have you worked with TEC materials? ____ years

____ months.

5. Would you briefly describe the objectives of the TEC program (as you see them)?

_____

_____

_____

B. Integration into Training

6. (a) How did you originally find out how TEC could be used in (your) training programs?

____ TEC Lesson for "Green Tabbers"

____ Other TEC Literature

____ Other sources (please describe) _____

_____

(b) Was this introductory information satisfactory to enable you to use (or suggest ways to use) TEC effectively in unit training?

____ Yes ____ No

Comments: _____

_____

7. What information does this unit currently receive regarding TEC and TEC use?

Information	Source
_____	____ TEC
_____	____ Local TASO
_____	____ Bde/Div
_____	____ Other _____
_____	_____

Is this information satisfactory in that it enables the unit to use TEC effectively?

_____ Yes

_____ No, more information is needed

If no, what information is needed? _____

_____

8. How do you (does the S3) find out about the arrival of new TEC lessons?

_____

_____

9. Do you receive current TEC distribution lists? ____ Yes ____ No

10. Have you ever ordered lessons in addition to those you receive automatically? _____ Yes _____ No

11. Do you receive all of the TEC lessons that are of interest to your battalion?

_____ Yes _____ no _____ Don't know

If no, what lessons are needed? _____

_____

_____

12. Have you had any problems in receiving TEC lessons or equipment from Tobyhanna? ____ Yes ____ No ____ Not sure

If yes, please describe (type & frequency)

_____ ____ Delay

_____ ____ Damage

_____ ____ Loss of order

13. How is the use of TEC encouraged in this unit? (check all that apply)

_____ weekly or monthly meetings with Co/Btry officers

_____ special briefings on TEC

_____ orders/requests to specific soldiers to use TEC

_____ announcements encouraging TEC use

_____ special recognition or rewards for TEC use

_____ general orders

_____ other (please describe) _____

_____

_____

14. To what extent has there been command emphasis to use TEC from higher levels of command?

_____ to no extent

_____ to a little extent

_____ to a moderate extent

_____ to a great extent

_____ to quite an extent

This emphasis has come from the _____ battalion level

_____ brigade

_____ division

_____ other (group, etc.)

15. The best method of training depends upon the task and circumstances. However, in this question we would like to get an idea of how useful TEC is (compared to other methods of training) for SQT preparation. Please choose only one method of training for each of the following comparisons.

On the average, which method of training do you think will best prepare a soldier for the SQT?

A. ____ Hearing lectures on MOS topics _____ studying TEC

B. ____ Watching classroom demonstrations _____ studying TEC

C. ____ Participating in exercises using equipment _____ studying TEC

D. ____ Participating in exercises using models of equipment _____ studying TEC

E. ____ Being in small group discussions on MOS topics _____ studying TEC

F. ____ Watching training films _____ studying TEC

G. ____ Reading the soldier's manual _____ studying TEC

H. ____ Reading FM's, TM's _____ studying TEC

16. Please mark all of the following ways in which TEC is used in this unit.

_____ Soldiers use TEC lessons by themselves

_____ Instructors use the written TEC lesson objectives

_____ Instructors use TEC lessons as parts of lectures

_____ Instructors show TEC lessons instead of lectures

_____ Instructors use TEC lessons with demonstrations

_____ Instructors use TEC lessons with or to prepare for hands-on exercises

17. Does TEC play a role in any of the following types of training in this unit?

programs for upgrading enlisted qualifications ____Yes ____No

special training for NCO's ____Yes ____No

use of criterion tests to determine qualifications ____Yes ____No

incentive programs encouraging participation in skill development activities (on/off duty) ____Yes ____No

other special training programs (please describe under "comments") ____Yes ____No

Comments: (on nature of programs and/or how TEC is used)

_____

_____

_____

_____

18. Does TEC make your job easier? ____Yes ____ No ____ Uncertain

Describe benefits: _____

_____

19. Does TEC make your job harder? ____ Yes ____No ____ Uncertain

Describe problems: _____

_____

20. What specific events cause the use of TEC to go up or down in the unit?

EVENT	TEC USE GOES	COMMENTS
____ SQT	____ up ____ down	_____
____ ARTEP	____ up ____ down	_____
____ inclement weather	____ up ____ down	_____
____ maneuvers	____ up ____ down	_____
____ other (please describe)	____ up ____ down	_____

C. Equipment

21. (a) Has the TEC (CUE/SEE) machine failed frequently enough to hinder the effectiveness of the TEC program in this unit?

____ Yes ____ No ____ I don't know

(b) If yes, please describe the most frequent malfunctions (in terms of "what goes wrong" rather than in technical terms, e.g., "film won't advance", "focus not clear").

_____

_____

_____

_____

(c) Have the audio tape cassettes or film cartridges failed frequently enough to hinder the effectiveness of the TEC program in this unit?

____ Yes ____ No ____ I don't know

(d) If yes, please describe the most frequent malfunctions.

_____

_____

_____

D. Support Maintenance

22. (a) Active component units: Do you use any maintenance facilities other than the local training and Audiovisual Service Center (TASC)?

____ No ____ Yes

Facility: _____

(b) Reserve Component Units: Your designated maintenance facility for TEC equipment is: _____ approximately _____ miles away from battalion headquarters.

(c) Are there any problems in transporting/receiving equipment from the maintenance facility? ____ Yes ____ No ____ I don't know

If so, please describe: _____

_____

(d) Are you able to direct exchange malfunctioning equipment with TASC (or alternate facility)?

Cassettes/filmstrips	TEC (CUE/SEE machines
____ always	____ always
____ frequently	____ frequently
____ sometimes	____ sometimes
____ never	____ never

(e) Are there any problems with repair of defective equipment?

____ No

____ Yes, excessive delay (____ weeks ____ months)

____ Yes, incorrect repair

____ Yes, other (describe) _____

_____

(f) Please list any suggestions you have for improving preventive or organizational maintenance for the TEC equipment. _____

_____

_____

E. Management

23. (a) How many TEC (CUE/SEE) machines does the unit normally have on hand? _____

(b) If less than 8, are extra machines:

____ in maintenance How many: ____

____ on loan ____

____ never issued ____

____ other ____

(c) Is the basis of issue (8 machines 1 battalion) adequate?

____ Yes ____ No ____ Not sure

(d) If not, please describe what is needed and why.

_____

_____

_____

(e) Is the basis of issue for lessons (1 copy of each lesson per battalion) adequate?

____ Yes ____ No ____ Not sure

(f) If not, please describe what is needed and why.

_____

_____

_____

(g) Is the basis of issue for headsets (1 per CUE/SEE) adequate?

____ Yes ____ No ____ Not sure

(h) If not, please describe what is needed and why.

_____

_____

_____

24. Where are the TEC (CUE/SEE) machines kept?

_____

25. Where are the TEC lessons kept?

_____

26. Is there adequate storage space for the TEC equipment and lessons?

____ Yes ____ No ____ Not sure

27. Is there a problem with theft of any of the TEC equipment or cassettes and cartridges?

____ Yes ____ No ____ Not sure

28. Are any records of TEC use maintained at the battalion? ___Yes ___No

If so, what information is recorded? _____

_____

_____

_____

29. Does the battalion have a sign-out procedure for TEC lessons?

____ Yes ____ No

If so, who may sign out lessons and for how long? _____

_____

_____

30. Please check all the following locations where TEC is used on a temporary basis.

____ ranges

____ mobile learning centers

____ company areas

____ armories

____ other (please describe) _____

_____

_____

31. Has the battalion used TEC "in the field?"

____ Yes ____ No ____ Not sure

If so, check if any of the following problems have occurred?

____ problems with power sources (generators)

____ problems due to effects of humidity/temperature on equipment

____ lack of adequate mobile center

____ lack of adequate field use area

____ other (please describe) _____

_____

F. Locations of Use

32. (a) Are there any areas set up for individual TEC study:

at the company level ____ Yes ____ No

at the battalion level ____ Yes ____ No

at the brigade level ____ Yes ____ No

at the division/installation level ____ Yes ____ No

(b) If so, please describe the(se) facility(ies)

Type of facility	Hours of operation	Permanent staff
_____	_____	____ Yes ____ No
_____	_____	____ Yes ____ No
_____	_____	____ Yes ____ No
_____	_____	____ Yes ____ No

33. Have there been any complaints/requests to have TEC facilities open at other times?

____ Yes ____ No ____ Don't know

If yes, what hours are usually requested: _____

_____

34. Have there been any problems staffing battalion or company level TEC study areas?

____ Yes ____ No ____ Don't know

If yes, please describe: _____

_____

35. (a) If a soldier in your unit wanted to use a TEC lesson for individual study - would the time, distance, and/or procedures involved in obtaining the lesson discourage him from doing so?

____ definitely yes

____ probably yes

____ maybe

____ probably not

____ definitely not

(b) To what facility would he most likely go to do this? _____

_____

G. Lessons

36. Do you believe there are any problems with the content of the TEC lessons? (check if mentioned, ask if not)

____ inaccurate

____ out-of-date

____ don't cover areas my troops need

____ other; describe: _____

_____

H. General

38. (a) Do you think the Army should continue the TEC program?

____ Yes ____ No ____ Not sure

(b) If no, describe major reasons why not and what, if anything, can replace TEC?

_____

_____

(c) If yes:

(1) Can you think of any changes that can be made in your command which would increase the effectiveness of the TEC program?

____ No ____ Yes Describe: _____

_____

_____

(2) Can you think of any changes that can be made in the TEC program which would increase its effectiveness?

____ No ____ Yes

If yes, please describe: _____

_____

_____

Brigade, Division Interview

A. Information about Respondent (enter the following information:)

1. Brigade _____ Division _____

2. Title of Position _____ 3. Pay Grade _____

4. Brigade level _____ Division Level _____

5. Brief summary of duties with regard to training:

_____

_____

_____

6. How long have you been in your current position?

_____ years _____ months

7. How long have you been familiar with TEC materials?

_____ years _____ months

8. Would you briefly describe the objectives of the TEC program (as you see them)?

_____

_____

_____

B. Management - Integration into Training

9. Do you currently receive any information about TEC?

_____ Yes _____ No

If yes, what information _____

_____

10. To what extent is emphasis placed on TEC use from your level (Bde, Div) to lower levels in the chain of command?

____ to no extent

____ to a little extent

____ to a moderate extent

____ to a great extent

____ to quite an extent

11. To what extent has there been command emphasis to use TEC from higher levels of command?

____ to no extent

____ to a little extent

____ to a moderate extent

____ to a great extent

____ to quite an extent

12. The best method of training depends upon the task and circumstances. However, in this question we would like to get an idea of how useful TEC is (compared to other methods of training) for SQT preparation. Please choose only one method of training for each of the following comparisons.

On the average, which method of training do you think will best prepare a soldier for the SQT?

A. ____ Hearing lectures on MOS topics ____ studying TEC

B. ____ Watching classroom demonstrations ____ studying TEC

C. ____ Participating in exercises using equipment ____ studying TEC

D. ____ Participating in exercises using models of equipment _____ studying TEC

E. ____ Being in small group discussions on MOS topics _____ studying TEC

F. ____ Watching training films ____ studying TEC

G. ____ Reading the soldier's manual ____ studying TEC

H. ____ Reading FM's, TM's ____ studying TEC

13. In your opinion what, if any, role does the Brigade/Division level training office play in management/implementation of the TEC program?

_____

_____

_____

C. Locations of Use

14. Is there a learning center of other facility with TEC materials to serve your entire Brigade/Division (installation)?

____ Yes ____ No

15. If yes, please indicate the type of facility (e.g., Education Center, MOS library)

_____

16. Does this facility have a permanent staff?

____ Yes ____ No

If yes, how large is the staff? _____ people

Is the staff size adequate? ____ Yes ____ No

If no, please explain: _____

_____

_____

17. What are the hours of operation of the facility? _____

Have there been requests/complaints to have the facility open at other times? ____ Yes ____ No

If yes, what times are requested? _____

_____

18. How many TEC (CUE/SEE) machines does the facility have? _____

Is this an adequate number? _____ Yes _____ No

If no, what is needed? _____

_____

19. Does the facility have a full set of those TEC lessons which have been distributed?

____ Yes ____ No

Is the stock of lessons adequate? ____ Yes ____ No

If no, please explain: _____

_____

20. Does the facility acquire TEC lessons and equipment by:

A. ____ TEC pinpoint distribution

B. ____ Special arrangement at the post/installation

C. ____ Other (please describe) _____

_____

Is the facility adequate in terms of space, lighting, etc.?

____ Yes ____ No

If no, what is needed? _____

_____

21. Has there been any problem with theft of TEC lessons or equipment?

____ Yes ____ No

22. Does the facility have a procedure for signout of TEC lessons/ equipment?

____ Yes ____ No

23. If yes, who may sign out machines and for how long? _____

_____

_____

24. Does the facility maintain any records to TEC use? ____ Yes ____ No

If yes, what information is recorded? _____

_____

_____

25. Is the facility conveniently located with regard to troop housing and duty areas?

____ Yes ____ No

Comments: _____

_____

26. Has there been a problem of failure of TEC lessons or equipment at the facility?

____ Yes ____ No ____ Not sure

If yes, please describe the major malfunctions: _____

_____

_____

27. Have there been any problems with repair of the TEC equipment?

____ No

____ Yes (no direct exchange)

____ Yes (Slow turnaround)

____ Yes (pickup/delivery)

____ Yes (incorrect repair)

____ Yes (other, please describe) _____

_____

_____

H. General

(a) Do you think the Army should continue the TEC program?

____ Yes ____ No ____ Not sure

(b) If no, describe major reasons why not and what, if anything, can replace TEC?

_____

_____

(c) If yes:

(1) Can you think of any changes that can be made in your command which would increase the effectiveness of the TEC program?

____ No ____ Yes Describe: _____

_____

_____

(2) Can you think of any changes that can be made in the TEC program which would increase its effectiveness?

____ No ____ Yes

If yes, please describe: _____

_____

_____

TASC Interview

Enter the following information;

1. pay grade_____
2. title of current position _____
3. (a) co_____
   (b) bn_____
   (c) combat arms branch_____
   (d) installation (if above not appropriate)_____

4. Approximately how long have you worked with TEC materials in your current position (or similar position)?
   _____years _____months

5. How does the Beseler CUE-SEE projector compare with other audio-visual gear in terms of its frequency of failure?
   _____very much below average failure rate
   _____below average failure rate
   _____average failure rate
   _____above average failure rate
   _____very high failure rate
   _____I'm not sure

6. (a) List the major malfunctions which result in the most downtime for the projector: (categories for reduction: optical system, film transport, audio playback, film drive - automatic and general)
   _____
   _____
   _____

   (b) List the major malfunctions of the tape cassettes and film cartridges. _____
   _____
   _____

7. In your opinion, do any of the common malfunctions result from: (If yes, please describe problem.)
   (a) inadequate preventive maintenance
   no __ _____
   yes__ _____
   _____

   (b) "rough" usage or vandalism
   no__ _____
   yes__ _____
   _____

   (c) poor product design
   no__ _____
   yes__ _____
   _____

(d) other reasons

no__ _____

yes__ _____

_____

_____

(e) can't tell reasons

no__ _____

yes__ _____

_____

_____

8. Are there any problems involved in the pick-up and delivery of defective equipment?

no_____ yes_____

If yes, please describe_____

_____

_____

9. (a) In your opinion, is most of the TEC equipment repaired in a reasonable amount of time?

no_____ yes_____

(b) If no, what are the major reasons for the delays (Check alternative if mentioned; ask if not and put into comment line.)

__inadequate manpower levels for workload

__inadequate training of staff

__other, please describe _____

_____

_____

_____

10. (a) Is the float capability for TEC equipment (projectors, cassettes, cartridges) adequate to DX reserve equipment for broken units?

no___ yes___

(b) If no, why (Check alternative if mentioned; ask if not and put into comment line.)

__float is used for other purposes

__inadequate BOI for CUE-SEEs

__inadequate BOI for lessons

__other, please describe _____

_____

_____

11. Do you maintain any formal records for the TEC equipment? (Check alternative if mentioned; ask if not and put into comment line.)

___standard form 2407 ___standard form 4125

___standard form 2404 ___other, please describe

_____

_____

_____

12. (a) Do you have the TEC Maintenance and Service Manuals?

no___ yes___ not sure___

(b) If yes, do you find that you need information in addition to the manual(s)?

no___ yes___ not sure___

What information?_____

_____

_____

What information?_____

_____

13. (a) Has the lack of repair parts ever hindered the efficient repair of the TEC equipment?
no___ yes___ not sure___

(b) If yes, which parts should be added to the repair parts kit or what other changes should be made?

_____

_____

_____

14. (a) When there are problems with the CUE-SEE projector that local support maintenance cannot handle, where do you send the equipment?

_____

(b) Are there any problems associated with this procedure?
no___ yes___
If yes, please describe _____

_____

15. Are there any problems involved in the reception of TEC lessons or equipment from Tobyhanna?
no___ yes___

If yes, please describe _____

_____

16. Can you think of any ways to improve support maintenance for the TEC equipment?
no___ yes___
If yes, please describe _____

_____

_____

APPENDIX D ADJUSTMENTS TO COMPUTATION

The standard method for determining total TEC uses recorded on a single form was to use the "lessons available" column. For TEC Group Usage Forms this was multiplied by the "number of users in group" column.

Where errors occurred in recording of responses on the form, the following corrections were made:

ERROR 1. If the number of lessons recorded as "available" was larger than the number recorded as "requested", it was assumed that the user was indicating the number of lessons available in the entire series rather than of those requested.

ADJUSTMENT 1: In these cases, "number requested" was recorded as the number of lessons used in the session.

ERROR 2: Only one usage form was required for a single lesson series. Some users completed a separate form for each lesson in the series and indicated on each form the total number of lessons requested and available.

ADJUSTMENT 2: Within a unit, forms were checked to determine whether several lesson numbers within a series were checked out at the same date and time. If so, each form was recorded as having had only one lesson used.

ERROR 3: Each TEC Individual Use Form was to be used by one (1) user. However, users could indicate whether several people used the lesson at one time. In some cases, these additional individual users failed to complete separate use forms.

ADJUSTMENT 3: TEC Individual Usage Forms recording several users in a group required checks to determine whether other forms within the unit were completed for the same lesson number, date, and time. If these were not found, use on the completed form was multiplied by the number of users in the group.

The above three types of errors were the most commonly occurring types. A number of less frequently occurring errors were dealt with on an ad hoc basis.